

\* PLEASE GIVE REQUEST TO MR. K. FULLER. THANKS

Access DB# 192552

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: HELEN PEZZUTO Examiner #: 70058 Date: 3/17/06  
Art Unit: 1713 Phone Number: 302-1108 Serial Number: 10/799,477  
Mail Box and Bldg/Room Location: REM-10429 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: SEE ATTACHED SCIENTIFIC REFERENCE BR  
Inventors (please provide full names): ↓ Sci & Tech Inf. Ctr.  
MAR 21 2006

Earliest Priority Filing Date: 3/14/03 Pat. & T.M. Office

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search copolymer containing  
(1) an alkyl or aryl methacrylate  
(i.e. methyl methacrylate)  
(2) a phosphate-containing monomer defined  
in cl. 1  
(species in cls. 4 & 5)  
utility  
denture, dental application.  
Many thanks!

\*\*\*\*\*

### STAFF USE ONLY

|  | Type of Search         | Vendors and cost where applicable |
|--|------------------------|-----------------------------------|
| Searcher: <u>A. Fuller</u>             | NA Sequence (#) _____  | STN <u>✓</u>                      |
| Searcher Phone #: _____                | AA Sequence (#) _____  | Dialog _____                      |
| Searcher Location: _____               | Structure (#) <u>2</u> | Questel/Orbit _____               |
| Date Searcher Picked Up: _____         | Bibliographic _____    | Dr. Link _____                    |
| Date Completed: <u>3/21/06</u>         | Litigation _____       | Lexis/Nexis _____                 |
| Searcher Prep & Review Time: <u>40</u> | Fulltext _____         | Sequence Systems _____            |
| Clerical Prep Time: _____              | Patent Family _____    | WWW/Internet _____                |
| Online Time: <u>29</u>                 | Other _____            | Other (specify) _____             |



# ***STIC Search Report***

**EIC 1700**

**STIC Database Tracking Number: 182532**

**TO: Helen Pezzuto  
Location: REM 10A29  
Art Unit : 1713  
March 21, 2006**

**Case Serial Number: 10/799477**

**From: Kathleen Fuller  
Location: EIC 1700  
REMSEN 4B28  
Phone: 571/272-2505  
Kathleen.Fuller@uspto.gov**

## **Search Notes**



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

=> FILE REG

FILE 'REGISTRY' ENTERED AT 13:43:08 ON 21 MAR 2006

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 MAR 2006 HIGHEST RN 877371-73-8

DICTIONARY FILE UPDATES: 20 MAR 2006 HIGHEST RN 877371-73-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

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<http://www.cas.org/ONLINE/UG/regprops.html>

=> FILE HCAPL

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FILE COVERS 1907 - 21 Mar 2006 VOL 144 ISS 13

FILE LAST UPDATED: 20 Mar 2006 (20060320/ED)

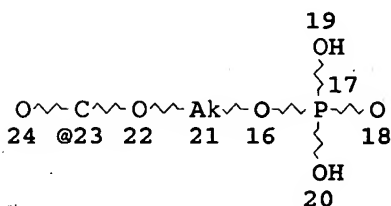
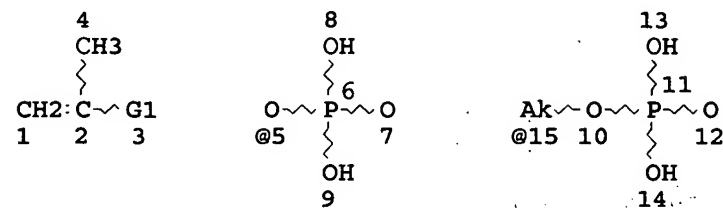
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L5

STR



VAR G1=5/15/23

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 7

CONNECT IS E1 RC AT 12

CONNECT IS E1 RC AT 24

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L7 SCR 2043

L9 3553 SEA FILE=REGISTRY SSS FUL L5 AND L7

L10 538 SEA FILE=REGISTRY ABB=ON L9 AND 2/NC

L12 320320 SEA FILE=REGISTRY ABB=ON POLYACRYLIC/PCT

L13 513 SEA FILE=REGISTRY ABB=ON L10 AND L12

L15 811 SEA FILE=HCAPLUS ABB=ON L13

L17 422 SEA FILE=HCAPLUS ABB=ON L15 (L) PREP/RL

L18 40 SEA FILE=HCAPLUS ABB=ON L17 AND DENT?

L20 39 SEA FILE=HCAPLUS ABB=ON L18 AND PHARMACEU?/SC, SX

L22 1656 SEA FILE=REGISTRY ABB=ON 24599-21-1/CRN

L23 3 SEA FILE=REGISTRY ABB=ON 61005-17-2/CRN

L24 132 SEA FILE=REGISTRY ABB=ON L13 AND (L22 OR L23)

L26 72010 SEA FILE=REGISTRY ABB=ON 80-62-6/CRN

L27 3 SEA FILE=REGISTRY ABB=ON L24 AND L26

L28 22 SEA FILE=HCAPLUS ABB=ON L27

L29 5 SEA FILE=HCAPLUS ABB=ON L28 AND DENT?

L30 258 SEA FILE=HCAPLUS ABB=ON L24

L31 19 SEA FILE=HCAPLUS ABB=ON L30 (L) DENT?

L32 11 SEA FILE=HCAPLUS ABB=ON L31 (L) PREP/RL

L33 40 SEA FILE=HCAPLUS ABB=ON L20 OR L29 OR L32

=> D L33 BIB ABS HITIND HITSTR 1-40

3,553 polymers from the query

L33 ANSWER 1 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2006:148302 HCAPLUS

DN 144:219381

TI Primer compositions for adhesion of hardened dental composite materials

IN Kimura, Mikio; Ibaraki, Kazuya; Mizuta, Yuko

PA Tokuyama Corp., Japan; Tokuyama Dental Corp.

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2006045094  | A2   | 20060216 | JP 2004-226298  | 20040803 |
| PRAI | JP 2004-226298 |      | 20040803 |                 |          |

AB The invention relates to a primer composition for applying to a hardened dental composite material prior to adhesion of the composite material to teeth or other dental material through a (meth)acrylic adhesive, wherein the primer composition contains an acidic group-containing polymerizable monomer, an aromatic amine, and a volatile organic solvent, and wherein the monomer and the amine are packaged sep., and mixed together before the usage. The primer composition provides improved adhesion strength with excellent storage stability and handling property. The primer composition may further contain other monomers. For example, a primer composition A containing 2-methacryloyloxyethyl dihydrogenphosphate/bis(2-methacryloyloxyethyl)hydrogenphosphate (1/4) 0.3, 11-methacryloyloxy-1,1-undecanedicarboxylic acid 0.7, 1,6-bis(methacrylethyloxycarbonylamino)-2,2,4-trimethylhexane/1,6-bis(methacrylethyloxycarbonylamino)-2,4,4-trimethylhexane 0.5, and acetone 3.5 g, and a primer composition B containing N,N-dimethyl-p-toluidine 0.5, water 0.3, and acetone 4.2 g were prepared, mixed together before applying a dental composite resin material.

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

ST arom amine acidic monomer dental composite adhesion primer

IT Dental materials and appliances  
(adhesives; primer compns. for adhesion of hardened dental composite materials)

IT Amines, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(aromatic; primer compns. for adhesion of hardened dental composite materials)

IT Dental materials and appliances

(composites; primer compns. for adhesion of hardened dental composite materials)

IT Dental materials and appliances

(primers; primer compns. for adhesion of hardened dental composite materials)

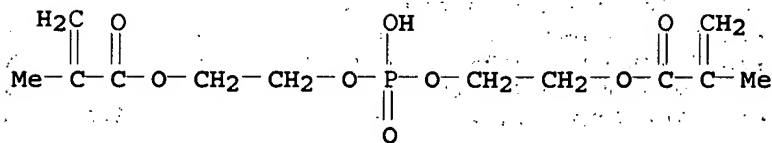
IT 76067-46-4P 213822-85-6P, Bis(2-methacryloyloxyethyl)hydrogenphosphate-2-methacryloyloxyethyl dihydrogenphosphate-11-methacryloyloxy-1,1-undecanedicarboxylic acid copolymer 405218-81-7P 875930-64-6P 875930-65-7P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(primer compns. for adhesion of hardened dental composite materials)

IT 99-97-8, N,N-Dimethyl-p-toluidine

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(primer compns. for adhesion of hardened dental composite materials)

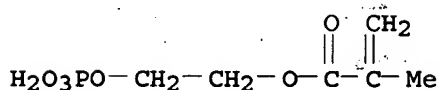
materials)  
IT 67-63-0, Isopropyl alcohol, uses 67-64-1, Acetone, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; primer compns. for adhesion of hardened dental  
composite materials)  
IT 76067-46-4P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological  
study); PREP (Preparation); USES (Uses)  
(primer compns. for adhesion of hardened dental composite  
materials)  
RN 76067-46-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phosphinobis(oxy-2,1-ethanediyl) ester,  
polymer with 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)  
CM 1  
CRN 32435-46-4  
CMF C12 H19 O8 P



CM 2

CRN 24599-21-1

CMF C6 H11 O6 P



L33 ANSWER 2 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:1196469 HCAPLUS

DN 143:446615

TI    Ski disinfectant compositions and alleviation of skin irritation by adding phosphorylcholine-like group-containing polymers

IN Tsuchida, Mamoru; Inomata, Kiyoshi

PA NOF Corporation, Japan.

50 Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

PI JP 2005314336 A2 20051110 JP 2004-136372 20040430

PRAI JP 2004-136372 20040430

AB The comps. for cosmetics, ointments, contact lens cleaners, denture cleansers, etc., contain 0.0001-10% disinfectants and 0.001-20% phosphorylcholine-like group-containing polymers. Thus, survival

rate of SIRC cells in a culture medium containing 0.0001% NaClO and 1% Bu methacrylate-2-methacryloyloxyethyl-2'-(trimethylammonio)ethyl phosphate copolymer (I; preparation given) was  $\geq 80\%$ . Addition of I also alleviated skin irritation of NaClO solution in volunteers.

IC ICM A61K007-40  
ICS A61K007-50; A61K031-00; A61K031-14; A61K031-4402; A61K031-4704;  
A61K031-80; A61K045-00; A61P017-00; A61P031-02; A61P031-04;  
A61K031-05; A61K031-155; A61K031-198; A61K031-473; A61K033-18;  
A61K033-20; A61K033-22; A61K033-28

CC 63-4 (Pharmaceuticals)

IT 125275-25-4P, Butyl methacrylate-2-methacryloyloxyethyl-2'-(trimethylammonio)ethyl phosphate copolymer  
RL: BSU (Biological study, unclassified); COS (Cosmetic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);  
PREP (Preparation); USES (Uses)  
(disinfectant compns. containing phosphorylcholine-like group-containing polymers to alleviate skin irritation)

IT 125275-25-4P, Butyl methacrylate-2-methacryloyloxyethyl-2'-(trimethylammonio)ethyl phosphate copolymer  
RL: BSU (Biological study, unclassified); COS (Cosmetic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);  
PREP (Preparation); USES (Uses)  
(disinfectant compns. containing phosphorylcholine-like group-containing polymers to alleviate skin irritation)

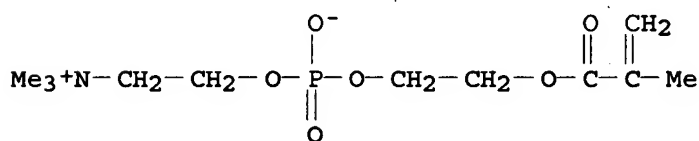
RN 125275-25-4 HCAPLUS

CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67881-98-5

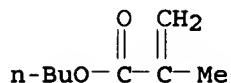
CMF C11 H22 N O6 P



CM 2

CRN 97-88-1

CMF C8 H14 O2



L33 ANSWER 3 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1041051 HCAPLUS

DN 143:332636

TI Dental coating compositions with long-lasting anticaries effect

IN Yamagishi, Atsushi

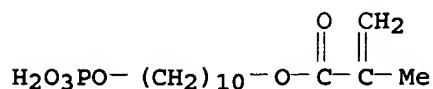


PA Kao Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | JP 2005263678   | A2   | 20050929 | JP 2004-77539   | 20040318 |
| PRAI | JP 2004-77539   |      | 20040318 |                 |          |
| AB   | Title compns. contain (A) film-forming polymers having P acid, CO <sub>2</sub> H, or carbonyloxycarbonyl group, and (B) CaF <sub>2</sub> and/or CaF <sub>2</sub> -F(HO) <sub>2</sub> PO composite. Thus, coating containing Et methacrylate-10-methacryloxydecyl dihydrogen phosphate copolymer and CaF <sub>2</sub> completely prevented decalcification of human teeth. |      |          |                 |          |
| IC   | ICM A61K006-00  |      |          |                 |          |
| CC   | 63-7 (Pharmaceuticals)  |      |          |                 |          |
| ST   | Section cross-reference(s): 1   |      |          |                 |          |
| ST   | calcium fluoride methacryloxydecyl dihydrogen phosphate copolymer dental; monofluorophosphoric acid calcium fluoride dental coating; film forming polymer dental coating anticaries   |      |          |                 |          |
| IT   | Dental materials and appliances   |      |          |                 |          |
|      | (coatings; dental coating compns. containing film-forming polymers and CaF <sub>2</sub> and/or its composite with monofluorophosphoric acid)  |      |          |                 |          |
| IT   | Human   |      |          |                 |          |
|      | (dental coating compns. containing film-forming polymers and CaF <sub>2</sub> and/or its composite with monofluorophosphoric acid)  |      |          |                 |          |
| IT   | 209518-56-9P  |      |          |                 |          |
|      | RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  |      |          |                 |          |
|      | USES (Uses)   |      |          |                 |          |
|      | (dental coating compns. containing film-forming polymers and CaF <sub>2</sub> and/or its composite with monofluorophosphoric acid)  |      |          |                 |          |
| IT   | 7789-75-5, Calcium fluoride, biological studies   |      |          |                 |          |
|      | RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)   |      |          |                 |          |
|      | (dental coating compns. containing film-forming polymers and CaF <sub>2</sub> and/or its composite with monofluorophosphoric acid)  |      |          |                 |          |
| IT   | 13537-32-1, Monofluorophosphoric acid   |      |          |                 |          |
|      | RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)   |      |          |                 |          |
|      | (dental coating compns. containing film-forming polymers and CaF <sub>2</sub> and/or its composite with monofluorophosphoric acid)  |      |          |                 |          |
| IT   | 209518-56-9P  |      |          |                 |          |
|      | RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  |      |          |                 |          |
|      | USES (Uses)   |      |          |                 |          |
|      | (dental coating compns. containing film-forming polymers and CaF <sub>2</sub> and/or its composite with monofluorophosphoric acid)  |      |          |                 |          |
| RN   | 209518-56-9 HCAPLUS   |      |          |                 |          |
| CN   | 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 10-(phosphonooxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)   |      |          |                 |          |

CM 1

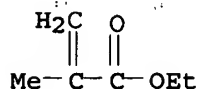
CRN 85590-00-7  
CMF C14 H27 O6 P



CM 2

CRN 97-63-2

CMF C6 H10 O2



L33 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:888181 HCAPLUS

DN 143:235561

TI Two-liquid-type dental adhesives for enamel application, and method for adhesion therewith

IN Nakatsuka, Kazumitsu; Takei, Mitsuru; Nishigaki, Naoki

PA Kuraray Medical Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2005225839 | A2   | 20050825 | JP 2004-38629   | 20040216 |
| PRAI | JP 2004-38629 |      | 20040216 |                 |          |

AB The invention relates to a two-liquid-type dental adhesive composition for mixing together before applying it to enamel for attaching orthodontic bracket, teeth manicure, and filling material, etc., wherein the adhesive composition consists of a 1st liquid composition containing a sulfonic group/(meth)acrylamide group-containing monomer, and a 2nd liquid composition containing phosphoric group/C6-20alkyl(alkylene) group-containing monomer. For example, a 1st composition containing 2-acrylamide-2-methylpropanesulfonic acid 20, water 30, ethanol 50, and BHT 0.1 parts, and a 2nd composition containing 10-methacryloyloxydecyldihydrogenphosphate 20 and ethanol 80 parts were formulated, and mixed before applying to enamel without using phosphoric acid etching treatment.

IC ICM A61K006-00

ICS A61K006-087

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

ST dental adhesive sulfone phosphate contg polymer

IT Dental materials and appliances

(adhesives; two-liquid-type dental adhesives for enamel application, and method for adhesion therewith)

IT Tooth

(enamel; two-liquid-type dental adhesives for enamel application, and method for adhesion therewith)

IT 862821-31-6P 862821-32-7P 862821-34-9P 862821-35-0P  
862821-36-1P 862821-38-3P 862821-39-4P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(two-liquid-type dental adhesives for enamel application, and method for adhesion therewith)

IT 862821-31-6P 862821-32-7P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(two-liquid-type dental adhesives for enamel application, and method for adhesion therewith)

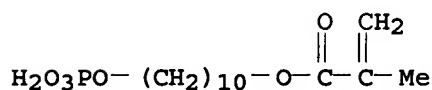
RN 862821-31-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 85590-00-7

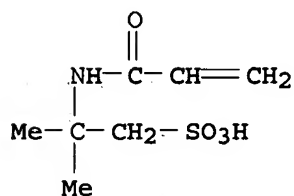
CMF C14 H27 O6 P



CM 2

CRN 15214-89-8

CMF C7 H13 N O4 S



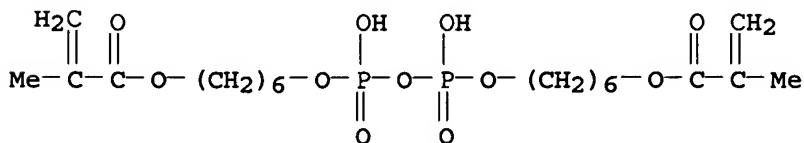
RN 862821-32-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 8,10-dihydroxy-8,10-dioxido-7,9,11-trioxa-8,10-phosphaheptadecane-1,17-diyl ester, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid (9CI) (CA INDEX NAME)

CM 1

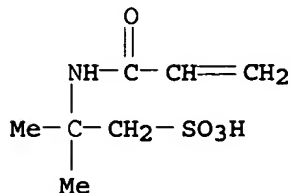
CRN 118529-92-3

CMF C20 H36 O11 P2



CM 2

CRN 15214-89-8  
CMF C7 H13 N O4 S



L33 ANSWER 5 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:878192 HCAPLUS

DN 141:355456

TI Modified **dental** prosthesis comprising phosphate-containing polymers

IN Periathamby, Antony R.; Dentino, Andrew R.

PA USA

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

|      | PATENT NO.      | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-----------------|------|----------|-----------------|----------|
| PI   | US 2004210018   | A1   | 20041021 | US 2004-799477  | 20040312 |
| PRAI | US 2003-455024P | P    | 20030314 |                 |          |

AB Phosphate-containing co-polymers useful for making **denture** bases, **denture** liners and tissue conditioners with phosphate anion-charged surfaces are disclosed. The phosphate anions enable the **denture** bases, **denture** liners and tissue conditioners to adsorb cationic antimicrobial mols. **Dentures**, **denture** bases materials, **denture** liners and tissue conditioners made of the above co-polymers are also disclosed. Further disclosed are methods for synthesizing the co-polymer(s) and for making the **denture** bases, **denture** liners and tissue conditioners. Me methacrylate-methallyl phosphate copolymer was prepared Histatin was adsorbed on the above polymer and tested for adherence of Candida albicans. Adherence of C. albicans to the polymer surface was inhibited.

IC ICM C08F230-02

INCL 526274000

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 35, 38

ST **dental** prosthesis phosphate polymer antibacterialIT **Dental** materials and appliances

(**denture** liners; modified **dental** prosthesis  
comprising phosphate-containing polymers)

IT Antimicrobial agents

(modified **dental** prosthesis comprising phosphate-containing  
polymers)

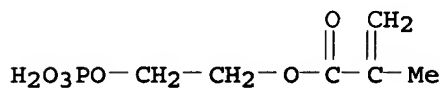
IT 75302-76-0P 776332-42-4P

RL: DEV (Device component use); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)

(modified **dental** prosthesis comprising phosphate-containing

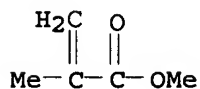
*applicant*

polymers)  
 IT 147445-14-5, Tissue conditioner  
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (modified dental prosthesis comprising phosphate-containing polymers)  
 IT 103220-14-0, Defensin 116229-36-8, Bactenecin 123781-17-9, Histatin  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (modified dental prosthesis comprising phosphate-containing polymers)  
 IT 75302-76-0P 776332-42-4P  
 RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (modified dental prosthesis comprising phosphate-containing polymers)  
 RN 75302-76-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 24599-21-1  
 CMF C6 H11 O6 P

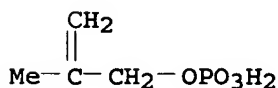


CM 2

CRN 80-62-6  
 CMF C5 H8 O2



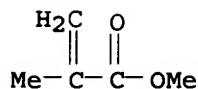
RN 776332-42-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-methyl-2-propenyl dihydrogen phosphate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 61005-17-2  
 CMF C4 H9 O4 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 6 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:794530 HCAPLUS

DN 141:301509

TI Dental compositions containing organic acid copolymers for improved stability during preservation

IN Shiniki, Kojima; Akishi, Arita; Go, Mashio; Daisuke, Ota; Daisuke, Usuki

PA GC Corporation, Japan

SO Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | EP 1462079  | A1   | 20040929 | EP 2004-7121    | 20040324 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK |      |          |                 |          |
|      | JP 2004352698   | A2   | 20041216 | JP 2003-156244  | 20030602 |
|      | US 2004254261   | A1   | 20041216 | US 2004-810692  | 20040329 |
| PRAI | JP 2003-90465   | A    | 20030328 |                 |          |
|      | JP 2003-156244  | A    | 20030602 |                 |          |

AB To provide a one component dental composition in which a polymerizable compound having an acidic group is coexisted with a reducing agent, such as a tertiary amine under the existence of water, and which is not cured with time during preservation, the dental composition comprises the polymerizable compound having an acidic group, the reducing agent, water and an aluminum oxide powder, wherein it is preferable that 0.4 mol equivalent or less of the acidic group of the polymerizable compound having the acidic group and 0.05 mol equivalent or less of a reduction part of the reducing agent are contained per 100 m2 of a sp. surface area of an aluminum oxide powder and that 5 to 35 weight parts of the polymerizable compound having the acidic group, 0.1 to 5 weight parts of the reducing agent, 10 to 55 weight parts of water, and 0.1 to 5 weight parts of the aluminum oxide powder are contained. For example, the dental composition containing aluminum oxide powder 2.5% and water 56.5% and the copolymer of 4-Acryloyloxy Et Trimellitic acid-Et 4-N,N-dimethyl aminoethyl benzoate was found to have good adhesive strength to enamel and dentin and improved preservation stability.

IC ICM A61K006-00

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 35

ST dental stability preservation org acid reducing agent aluminum oxide; aluminum oxide Acryloyloxy ethyltrimellitic acid dimethyl aminoethyl benzoate adhesion

IT Dental materials and appliances

(adhesives; dental compns. containing organic acid copolymers and reducing agents and aluminum oxide powder for improved preservation stability)

IT Dental materials and appliances  
(dental compns. containing organic acid copolymers and reducing agents and aluminum oxide powder for improved preservation stability)

IT 125120-26-5P 762303-33-3P 762303-34-4P 762303-35-5P  
762303-36-6P 762303-37-7P 762303-38-8P 762303-39-9P 762303-40-2P  
762303-41-3P 762303-42-4P 762303-43-5P 762303-44-6P 762303-45-7P  
762303-46-8P 762303-47-9P 762303-48-0P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental compns. containing organic acid copolymers and reducing agents and aluminum oxide powder for improved preservation stability)

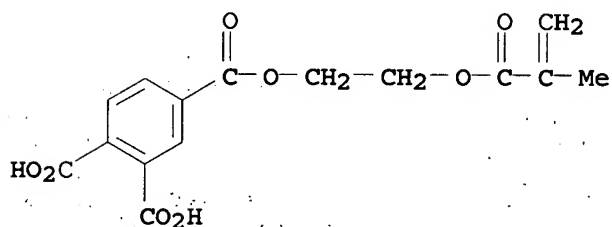
IT 1344-28-1, Aluminum oxide, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(powder; dental compns. containing organic acid copolymers and reducing agents and aluminum oxide powder for improved preservation stability)

IT 762303-33-3P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental compns. containing organic acid copolymers and reducing agents and aluminum oxide powder for improved preservation stability)

RN 762303-33-3 HCAPLUS  
CN 1,2,4-Benzenetricarboxylic acid, 4-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with phosphinicobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

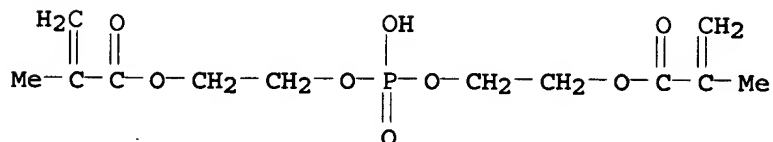
CM 1

CRN 68183-31-3  
CMF C15 H14 O8



CM 2

CRN 32435-46-4  
CMF C12 H19 O8 P



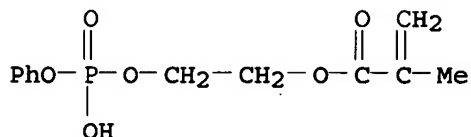
L33 ANSWER 7 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:764824 HCAPLUS  
DN 142:303449

TI High bonding strength and high quality hybridized **dentin** layer  
AU Tang, Ai-ming; Qi, Gen-miao; Wu, Ling-li; Chen, Chun; Chen, Ji-lan  
CS Dept. of Stomatology, Zhongnan Hospital, Wuhan Univ., Wuhan, 430071, Peop.  
Rep. China  
SO Huaxue Yu Nianhe (2004), 25(4), 232-234  
CODEN: HYZHEN; ISSN: 1001-0017  
PB Huaxue Yu Nianhe Bianji Weiyuanhui  
DT Journal  
LA Chinese  
AB The purpose of this study was to examine the effect of 2-methacryloxyethyl  
Ph phosphoric acid (phenyl-P)/2-hydroxyethyl methacrylate (HEMA) acetone  
- based primer **dentin** surfaces that were preconditioned with  
ethylenediaminetetraacetate (EDTA 5- 0) to remove the smear layer. We  
hypothesized this system could bring high bond strength and high quality  
hybridized **dentin**.  
CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 35  
ST methacryloxyethyl Ph phosphoric acid hydroxyethyl methacrylate  
**dental** adhesive **dentin**  
IT **Dental** materials and appliances  
(adhesives; high adhesion and high quality hybridized **dentin**  
layer made from methacryloxyethyl Ph phosphoric acid and hydroxyethyl  
methacrylate)  
IT Tooth  
(**dentin**; high adhesion and high quality hybridized  
**dentin** layer made from methacryloxyethyl Ph phosphoric acid and  
hydroxyethyl methacrylate)  
IT Adhesion, physical  
Yield strength  
(high adhesion and high quality hybridized **dentin** layer made  
from methacryloxyethyl Ph phosphoric acid and hydroxyethyl  
methacrylate)  
IT 67-64-1, Acetone, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(high adhesion and high quality hybridized **dentin** layer made  
from methacryloxyethyl Ph phosphoric acid and hydroxyethyl  
methacrylate)  
IT 64716-38-7P  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)  
(high adhesion and high quality hybridized **dentin** layer made  
from methacryloxyethyl Ph phosphoric acid and hydroxyethyl  
methacrylate)  
IT 150-43-6, Ethylenediaminetetraacetate, biological studies  
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(high adhesion and high quality hybridized **dentin** layer made  
from methacryloxyethyl Ph phosphoric acid and hydroxyethyl  
methacrylate)  
IT 64716-38-7P  
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)  
(high adhesion and high quality hybridized **dentin** layer made  
from methacryloxyethyl Ph phosphoric acid and hydroxyethyl  
methacrylate)  
RN 64716-38-7 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
2-[(hydroxyphenoxyphosphinyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA  
INDEX NAME)



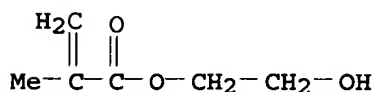
CM 1

CRN 64716-34-3  
CMF C12 H15 O6 P



CM 2

CRN 868-77-9  
CMF C6 H10 O3



L33 ANSWER 8 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:529731 HCAPLUS

DN 141:94387

TI Dental resin-reinforced cement pretreatment compositions

IN Ota, Daisuke; Nakaseko, Hisashi; Usu, Daisuke; Tokui, Hideki; Kato, Shinichi

PA G-C Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2004182661  | A2   | 20040702 | JP 2002-352467  | 20021204 |
| PRAI | JP 2002-352467 |      | 20021204 |                 |          |

AB The invention provides a pretreatment composition for applying on the tooth prior to applying a resin-reinforced cement for robust attachment of the cement material, wherein the pretreatment composition is characterized by containing a phosphoric acid group-containing polymerizable monomer 0.5-25, a carboxyl group-containing polymerizable monomer 0.5-50, a volatile organic solvent having a b.p. at normal pressure of  $\leq 200^\circ$  1-50, and water 10-90 %. A pretreatment composition containing 2-methacryloyloxyethyl dihydrogenphosphate 3, methacrylic acid 17, acetone 30, and water 50 % was applied to tooth surface prior to the application of resin-reinforced dental cement.

IC ICM A61K006-083

ICS A61C013-23; A61K006-00; C08F230-02

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

ST phosphate contg polymer dental cement pretreatment compn

IT Dental materials and appliances

(cements; dental resin-reinforced cement pretreatment compns.)

IT Polymers, biological studies  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dental resin-reinforced cement pretreatment compns.)

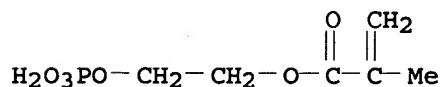
IT 163549-93-7P 714236-92-7P 714236-93-8P 714236-94-9P  
 714236-95-0DP, polymers with acrylic phosphate derivs. 714236-96-1P  
 714236-97-2P 714236-98-3P 714236-99-4P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dental resin-reinforced cement pretreatment compns.)

IT 163549-93-7P 714236-92-7P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dental resin-reinforced cement pretreatment compns.)

RN 163549-93-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with 2-(phosphonooxy)ethyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

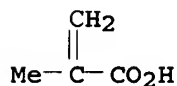
CM 1

CRN 24599-21-1  
 CMF C6 H11 O6 P



CM 2

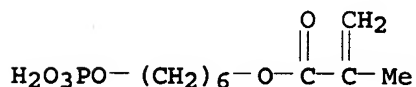
CRN 79-41-4  
 CMF C4 H6 O2



RN 714236-92-7 HCAPLUS  
 CN Benzoic acid, 4-[(2-methyl-1-oxo-2-propenyl)amino]-, polymer with  
 6-(phosphonooxy)hexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

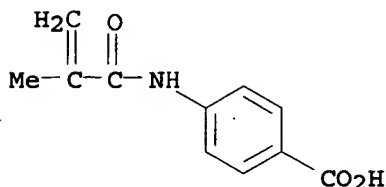
CRN 85589-96-4  
 CMF C10 H19 O6 P



CM 2

CRN 15286-99-4

CMF C11 H11 N O3



L33 ANSWER 9 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:906122 HCAPLUS

DN 139:369762

TI Compositions containing substances with little cytotoxicity and phosphorylcholine-like group-containing copolymers

IN Tsuchida, Mamoru; Shimada, Kunio; Kii, Tadahiho; Mitani, Motohiro; Sakaki, Ikuko; Sudo, Kenshiro; Suzuki, Tadashi

PA NOF Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003327778  | A2   | 20031119 | JP 2002-135995  | 20020510 |
| PRAI | JP 2002-135995 |      | 20020510 |                 |          |

AB The invention relates to a composition, e.g. cosmetic, ophthalmic solution, dentifrices, etc., characterized by containing a substance with little cytotoxicity, i. e. p-phenylenediamine, octyl methoxycinnamate, and/or hinokitiol 0.0001-20, and phosphorylcholine-like group-containing copolymer 0.001-20 %, wherein the addition of the phosphorylcholine-like group-containing copolymer decrease cytotoxicity of the composition, thereby preventing skin and/or mucosal irritation. A phosphorylcholine-like group-containing copolymer was prepared from 2-methacryloyloxyethyl-2'-(trimethylammonio)ethylphosphate 23.8 and butylmethacrylate 2.82 g, and its effect on cytotoxicity of p-phenylenediamine was in vitro tested.

IC ICM C08L043-02

ICS A61K007-00; A61K007-16; A61K007-30; A61K009-08; A61K031-122; A61K031-136; A61K031-216; A61K047-34; A61P027-02; C08K005-101; C08K005-17

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 62

IT 125275-25-4P, Butyl methacrylate-2-Methacryloyloxyethyl-2'-(trimethylammonio)ethylphosphate copolymer

RL: BUU (Biological use, unclassified); COS (Cosmetic use); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (comps. containing substances with little cytotoxicity and phosphorylcholine-like group-containing copolymers)

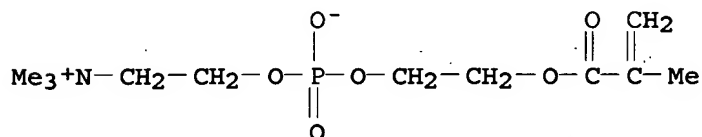
IT 125275-25-4P, Butyl methacrylate-2-Methacryloyloxyethyl-2'-(trimethylammonio)ethylphosphate copolymer

RL: BUU (Biological use, unclassified); COS (Cosmetic use); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (comps. containing substances with little cytotoxicity and phosphorylcholine-like group-containing copolymers)

RN 125275-25-4 HCAPLUS  
 CN 3,5,8-Trioxa-4-phosphaundec-10-en-1-aminium, 4-hydroxy-N,N,N,10-tetramethyl-9-oxo-, inner salt, 4-oxide, polymer with butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

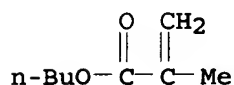
CM 1

CRN 67881-98-5  
 CMF C11 H22 N O6 P



CM 2

CRN 97-88-1  
 CMF C8 H14 O2



L33 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:274875 HCAPLUS

DN 138:288747

TI Adhesive compositions with good handling ability and water-resistant adhesion to metals useful for dental use

IN Nakatsuka, Kazuteru

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003105272  | A2   | 20030409 | JP 2002-206738  | 20020716 |
| PRAI | JP 2001-221275 | A    | 20010723 |                 |          |

AB Title compns. comprise (a)  $\geq 2$  polymerizable group- and fluorocarbon group-containing monomers, (b) adhesive monomers, and (c) solvents. Thus, a composition comprising  $\text{CH}_2:\text{CMeCOOCH}_2(\text{CF}_2)_6\text{CH}_2\text{OCOCMe}:\text{CH}_2$  5,  $\text{CH}_2:\text{CMeCOO}(\text{CH}_2)_{10}\text{SH}$  0.5, and ethanol 100 parts gave good adhesion to Au alloy and Au-Ag-Pd alloy after immersed in water at 37° for 24 h and at 70° for 40 days.

IC ICM C09J004-00

ICS A61K006-00; C09J011-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 63

ST water resistant dental adhesive compn fluoro contg acrylate polymer

IT Fluoropolymers, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(acrylic; adhesive compns. with good handling ability and water-resistant adhesion to metals useful for dental use)

IT Dental materials and appliances

(adhesives; adhesive compns. with good handling ability and water-resistant adhesion to metals useful for dental use)

IT Adhesives

(water-resistant; adhesive compns. with good handling ability and water-resistant adhesion to metals useful for dental use)

IT 507222-23-3P 507222-27-7P 507222-29-9P 507222-30-2P  
507222-34-6P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(adhesive compns. with good handling ability and water-resistant adhesion to metals useful for dental use)

IT 507222-09-5P 507222-10-8P 507222-11-9P 507222-12-0P 507222-13-1P  
507222-15-3P 507222-16-4P 507222-17-5P 507222-18-6P 507222-19-7P  
507222-20-0P 507222-21-1P 507222-22-2P 507222-24-4P 507222-25-5P  
507222-32-4P 507222-33-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(adhesive compns. with good handling ability and water-resistant adhesion to metals useful for dental use)

IT 507222-30-2P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(adhesive compns. with good handling ability and water-resistant adhesion to metals useful for dental use)

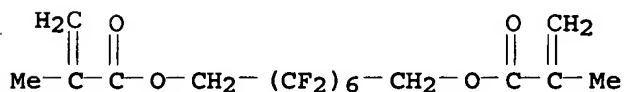
RN 507222-30-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonoxy)decyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoro-1,8-octanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 501952-34-7

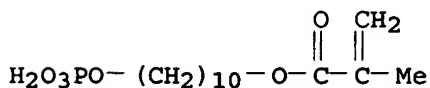
CMF C16 H14 F12 O4



CM 2

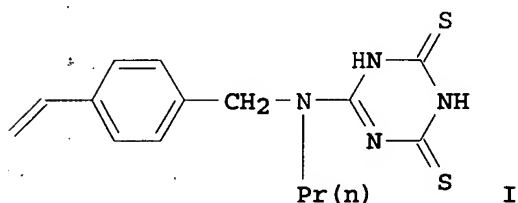
CRN 85590-00-7

CMF C14 H27 O6 P



L33 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2003:239906 HCAPLUS  
 DN 138:260535  
 TI Kits and method for manufacture of coatings with good adhesion to substrates  
 IN Nakatsuka, Kazumitsu  
 PA Kuraray Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 35 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.     | KIND | DATE      | APPLICATION NO. | DATE     |
|------|----------------|------|-----------|-----------------|----------|
| PI   | JP 2003089759  | A2   | 20030328  | JP 2001-283409  | 20010918 |
| PRAI | JP 2001-283409 |      | 20010918. |                 |          |
| GI   |                |      |           |                 |          |



AB The kits, useful as coatings for dental fillings, contain (A) adhesive primer compns. containing polymerizable monomers and solvents and (B) coating compns. containing monomers bearing fluorocarbon groups, other monomers, initiators, and inorg. fillers having refractive index of  $\geq 1.9$ . Thus, a gold alloy (Casting Gold M.C. Type IV) was coated with an adhesive composition containing 0.5 part I, dried, coated with a composition containing 1,8-dimethacryloyloxy-2,2,3,3,4,4,5,5,6,6,7,7-dodecafluorooctane 9, [2,2,4-trimethylhexamethylenebis(2-carbamoyloxyethyl)] dimethacrylate 21, d,1-camphorquinone 0.5, Et 4-N,N-dimethylaminobenzoate 0.3, TiO<sub>2</sub> 2, silane-treated silica 68, and BHT 0.015 part, and cured by light irradiation to give a coating showing peeling strength 25.1 MPa after storage at 70° for 30 days.

IC ICM C09D004-00  
 ICS B05D001-36; B05D007-24; A61K006-00

CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 38, 42, 56, 57

ST acrylic fluoropolymer coating dental alloy adhesion;  
 triadinedithione primer dental gold alloy adhesion;  
 methacryloyloxy fluorooctane coating dental alloy adhesion

IT Polyoxyalkylenes, biological studies  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)  
 (acrylic, fluorine-containing; kits and method for manufacture of coatings with good adhesion to dental fillings)

IT Fluoropolymers, biological studies  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(acrylic-polyoxyalkylene-; kits and method for manufacture of coatings with  
good adhesion to dental fillings)

IT Fluoropolymers, biological studies  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(acrylic; kits and method for manufacture of coatings with good adhesion to  
dental fillings)

IT Primers (paints)  
(kits and method for manufacture of coatings with good adhesion to  
dental fillings)

IT Dental materials and appliances  
(resins; kits and method for manufacture of coatings with good adhesion to  
dental fillings)

IT 502612-88-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(kits and method for manufacture of coatings with good adhesion to  
dental alloys)

IT 30998-06-2P 31763-59-4P 502612-74-0P 502612-75-1P 502612-76-2P  
502612-78-4P 502612-81-9P 502612-82-0P 502612-83-1P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)  
(kits and method for manufacture of coatings with good adhesion to  
dental fillings)

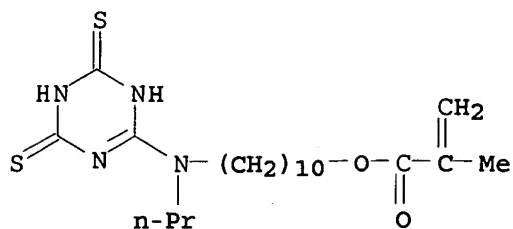
IT 162887-27-6P 502612-71-7P 502612-72-8P 502612-73-9P  
502612-79-5P 502612-80-8P 502612-84-2P 502612-85-3P  
502612-86-4P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(primers; kits and method for manufacture of coatings with good adhesion to  
dental fillings)

IT 502612-79-5P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(primers; kits and method for manufacture of coatings with good adhesion to  
dental fillings)

RN 502612-79-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 10-(phosphonoxy)decyl ester, polymer with  
10-[propyl(1,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)amino]decyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

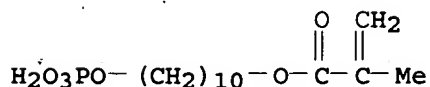
CM 1

CRN 502612-70-6  
CMF C20 H34 N4 O2 S2



CM 2

CRN 85590-00-7  
 CMF C14 H27 O6 P



L33 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2002:747650 HCAPLUS  
 DN 137:268500

TI Dental self-etching primer compositions containing  
 (meth)acrylate monomers and metal salts

IN Nemoto, Kimiya; Hayakawa, Toru; Kikutake, Kazuyo

PA Nihon University, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2002284616 | A2   | 20021003 | JP 2001-92131   | 20010328 |
| PRAI | JP 2001-92131 |      | 20010328 |                 |          |

AB The invention relates to a dental self-etching primer composition suitable for treatment of tooth enamel surface prior to applying a resin cement, wherein the primer contains methacrylate or acrylate acidic monomer, methacrylate or acrylate water-soluble monomer, and metal salt. A self-etching primer containing 2-methacryloyloxyethyl phosphate (Phosmer-M), 2-hydroxyethyl methacrylate, and FeCl<sub>3</sub> was applied on cattle tooth enamel, and air dried. Then, a resin cement composition containing 4-methacryloyloxyethyl trimellitic anhydride/ Me methacrylate solution, tri-n-butylborane, and polymethyl methacrylate powder was applied thereon, and hardened.

IC ICM A61K006-00

CC 63-7 (Pharmaceuticals)

ST dental self etching primer acrylate metal salt

IT Dental materials and appliances

(adhesives; dental self-etching primer compns. containing  
 (meth)acrylate monomers and metal salts for resin cements)

IT Dental materials and appliances

(cements; dental self-etching primer compns. containing  
 (meth)acrylate monomers and metal salts for resin cements)

IT Dental materials and appliances

(primers; dental self-etching primer compns. containing



(meth)acrylate monomers and metal salts for resin cements)

IT 71716-65-9P 136780-17-1P, 2-Hydroxyethyl methacrylate-Phosmer M copolymer  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dental self-etching primer compns. containing (meth)acrylate monomers and metal salts for resin cements)

IT 7705-08-0, Iron chloride (FeCl<sub>3</sub>), biological studies 9011-14-7, Polymethyl methacrylate  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dental self-etching primer compns. containing (meth)acrylate monomers and metal salts for resin cements)

IT 136780-17-1P, 2-Hydroxyethyl methacrylate-Phosmer M copolymer  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dental self-etching primer compns. containing (meth)acrylate monomers and metal salts for resin cements)

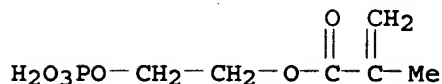
RN 136780-17-1 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

CMF C6 H11 O6 P

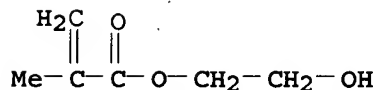


CM 2

CRN 102329-39-5  
 CMF C15 H14 O8  
 CCI IDS

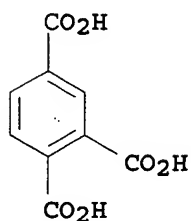
CM 3

CRN 868-77-9  
 CMF C6 H10 O3



CM 4

CRN 528-44-9  
 CMF C9 H6 O6



L33 ANSWER 13 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:674639 HCAPLUS

DN 137:206629

TI Photocurable acrylate endodontic sealing compositions and methods for using such compositions

IN Jensen, Steven D.; Fischer, Dan E.

PA USA

SO U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 2002123024  | A1   | 20020905 | US 2000-736729  | 20001214 |
| PRAI | US 2000-736729 |      | 20001214 |                 |          |

AB A multipart endodontic composition comprises at least two initially sep. parts which, upon mixing the parts together, form a mixed composition which is initially flowable and suitable for placement into a root canal during a root canal procedure and which hardens over time. The multipart endodontic composition includes: a polymerizable resin portion contained in at least one of the initially sep. parts and including an adhesive resin that is at least one of an alkyl acrylate or alkyl methacrylate and capable of bonding to dental tissue found within a root canal; at least one chemical initiator contained in at least one of the initially sep. parts which, upon mixing the parts together, causes at least a portion of the polymerizable resin portion to polymerize over a period of time; and at least one polymerization photoinitiator contained in at least one of the initially sep. parts which, upon irradiating at least a portion of the mixed composition with radiant energy, causes accelerated polymerization and hardening of at least a portion of the polymerizable resin portion. The compns. and are useful for sealing a root canal. The compns. may include a radio opacifying agent, so that they may be seen using X-rays, and one or more polymerization initiators to effect curing, typically both chemical and photo initiators to yield a dual cure sealant composition. The compns. are introduced into the root canal using a narrow cannula coupled to a high pressure hydraulic delivery device. Addnl. pressure may be applied to the sealant compns. using a syringe-like plunger introduced within a cylindrical access hole drilled through the crown of the tooth. A curing lamp may be used to cure the top layer of the sealant composition to provide a rigid bonding surface to which a composite resin can chemical bond or adhere.

IC ICM A61G005-02

ICS C08F136-08

INCL 433224000

CC 63-8 (Pharmaceuticals)

ST acrylate photocurable dental sealant root canal

IT Dental materials and appliances

(adhesives; photocurable acrylate endodontic sealing compns. and

methods for using such compns.)

IT Dental materials and appliances  
(fillings; photocurable acrylate endodontic sealing compns. and methods for using such compns.)

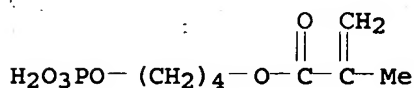
IT Dental materials and appliances  
(sealants, endodontic; photocurable acrylate endodontic sealing compns. and methods for using such compns.)

IT 212055-79-3P 212055-82-8P 452963-99-4P 452964-00-0P  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); **PREP** (Preparation); USES (Uses)  
(photocurable acrylate endodontic sealing compns. and methods for using such compns.)

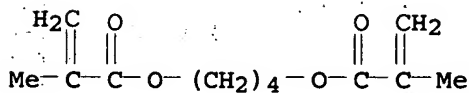
IT 212055-79-3P 452964-00-0P  
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); **PREP** (Preparation); USES (Uses)  
(photocurable acrylate endodontic sealing compns. and methods for using such compns.)

RN 212055-79-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester, polymer with 4-(phosphonooxy)butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 40074-59-7  
CMF C8 H15 O6 P

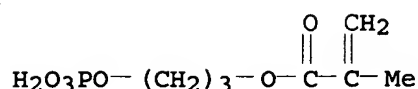
CM 2

CRN 2082-81-7  
CMF C12 H18 O4

RN 452964-00-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl ester, polymer with 3-(phosphonooxy)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 82427-01-8  
CMF C7 H13 O6 P



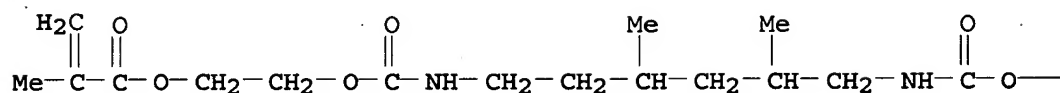
CM 2

CRN 72869-86-4

CMF C23 H38 N2 O8

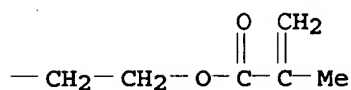
CCI IDS

PAGE 1-A



D1-Me

PAGE 1-B



L33 ANSWER 14 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:291712 HCAPLUS

DN 136:315061

TI Composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments

IN Jensen, Steven D.

PA Ultradent Products, Inc., USA

SO Ger. Offen., 16 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO.  | DATE     |
|------|----------------|------|----------|------------------|----------|
| PI   | DE 10150161    | A1   | 20020418 | DE 2001-10150161 | 20011011 |
| PRAI | US 2000-687117 | A    | 20001013 |                  |          |

AB The invention concerns two-component kits that include propylhexedrine or propylhexedrine hydrochloride as anticoagulants to treat pulp or pink dentin during invasive dental treatments; and a sealing composition that contains alkyl methacrylates with oxyphosphorus group, a polymerization initiator, dental fillers and antimicrobial agents. The sealing adhesive are light cured. The anticoagulant can be applied with a cotton ball having a hole; or using a syringe. Before sealing, the excess anticoagulant and other fluids are removed. The two components can be combined in a two-compartment syringe as a kit. The antimicrobial agent can be organohalogens, antibiotics, alkali metal hydroxides, alkaline earth metal oxides and alkaline earth metal hydroxides. Thus a hemostatic solution

- contained 20 weight/weight% propylhexedrine hydrochloride and 80 weight/weight% water. The antimicrobial adhesive sealing was formulated as (weight/weight%): Ca(OH)<sub>2</sub> 10.0; bis-glycerol methacrylate phosphate 5.0; urethane dimethacrylate 57.0; triethylene glycol dimethacrylate 6.0; titania 1.0; Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> 10.0; dimethylaminoethyl methacrylate 0.5, camphorquinone 0.2, and BaSO<sub>4</sub> 10.3.
- IC ICM A61C005-00  
ICS A61K006-00
- CC 63-7 (Pharmaceuticals)
- ST anticoagulant propylhexedrine dental adhesive antimicrobial methacrylate phosphate polymer
- IT Dental materials and appliances  
(adhesives; composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT Quaternary ammonium compounds, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(alkylbenzyl dimethyl, chlorides; composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT Antibiotics  
Anticoagulants  
Blood coagulation  
Gossypium hirsutum  
Syringes  
Test kits  
(composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT Acrylic polymers, biological studies  
Alkali metal hydroxides  
Alkaline earth hydroxides  
Alkaline earth oxides  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT Dental materials and appliances  
(fillings; composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT Halogen compounds  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(organohalogens; composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT Dental materials and appliances  
(sealants; composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT 84-65-1, 9,10-Anthraquinone 119-61-9, Benzophenone, biological studies  
574-09-4, Benzoin ethyl ether 3524-62-7, Benzoin methyl ether  
7473-98-5, 2-Hydroxy-2-methyl-1-phenyl-1-propanone 10373-78-1, Camphor quinone 75980-60-8, Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide  
RL: CAT (Catalyst use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)
- IT 212055-77-1P 411221-47-1P 411230-17-6P 411233-42-6P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)

IT 101-40-6, Propylhexedrine 123-03-5, Cetylpyridinium chloride 525-94-0, Penicillin N 547-52-4, 4'-Sulfamoylsulfanilamide 1007-33-6, Propylhexedrine hydrochloride 1304-28-5, Barium oxide, biological studies 7631-86-9, Silica, biological studies 7727-43-7, Barium sulfate 7758-87-4, Calcium phosphate 7759-02-6, Strontium sulfate 10476-85-4, Strontium chloride 13463-67-7, Titania, biological studies 32435-46-4 85699-20-3 411230-15-4 411230-16-5

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)

IT 411221-47-1P 411233-42-6P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(composition, method and test kit for hemostasis, pulp and dentin sealing and application for invasive dental treatments)

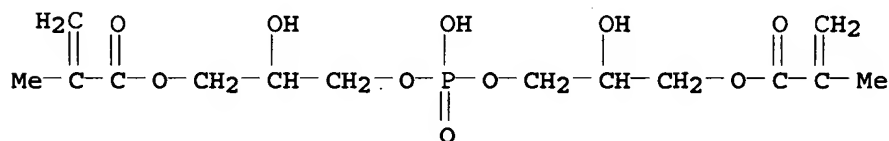
RN 411221-47-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, phosphinicobis[oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 2-(diethylamino)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85699-20-3

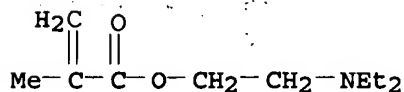
CMF C14 H23 O10 P



CM 2

CRN 105-16-8

CMF C10 H19 N O2



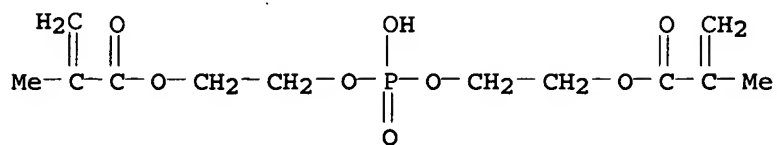
RN 411233-42-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, phosphinicobis(oxy-2,1-ethanediyl) ester, polymer with 1,2,3-propanetriol bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 32435-46-4

CMF C12 H19 O8 P

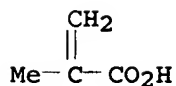


CM 2

CRN 28497-59-8  
 CMF C11 H16 O5  
 CCI IDS

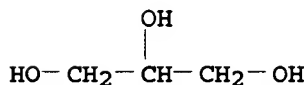
CM 3

CRN 79-41-4  
 CMF C4 H6 O2



CM 4

CRN 56-81-5  
 CMF C3 H8 O3



L33 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2002:98777 HCAPLUS  
 DN 136:156501  
 TI Adhesive compositions suitable for use for dental repair  
 IN Nakatsuka, Kazumitsu  
 PA Kuraray Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 22 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002038105  | A2   | 20020206 | JP 2000-219610  | 20000719 |
| PRAI | JP 2000-219610 |      | 20000719 |                 |          |

AB The invention relates to an adhesive composition providing excellent adhesion strength with metal, and water resistance, suitable for use as a dental adhesive, wherein the composition contains sulfur-containing silane coupling agent and acidic group-containing polymerizable monomer. A sulfur-containing silane coupling agent H3CO(OMe)2Si(CH2)4SH (4-BSM) 50 parts was combined with a monomer CH2:C(Me)COO(CH2)10OPO3H2 (MDP) 50 parts to

obtain an adhesive composition, and tested for its adhesion strength with a gold alloy.

IC ICM C09J004-00  
ICS A61K006-00

CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 38

ST sulfur silane coupling agent acidic monomer dental adhesive.

IT Silanes  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(adhesive compns. containing sulfur-containing silane coupling agents and acidic monomers suitable for use for dental repair)

IT Dental materials and appliances  
(adhesives; adhesive compns. containing sulfur-containing silane coupling agents and acidic monomers suitable for use for dental repair)

IT Coupling agents  
(silane; adhesive compns. containing sulfur-containing silane coupling agents and acidic monomers suitable for use for dental repair)

IT 118497-90-8P 395083-96-2P 395083-98-4P  
395084-00-1P 395084-03-4P 395084-06-7P 395084-08-9P  
395084-09-0P 395084-10-3P 395084-11-4P 395084-12-5P  
395084-14-7P 395084-16-9P 395084-18-1P  
395084-20-5P 395084-21-6P 395084-22-7P 395084-23-8P  
395084-24-9P 395084-25-0P 395084-26-1P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(adhesive compns. containing sulfur-containing silane coupling agents and acidic monomers suitable for use for dental repair)

IT 118497-90-8P 395083-96-2P 395084-00-1P  
395084-06-7P 395084-14-7P 395084-16-9P  
395084-18-1P 395084-20-5P 395084-23-8P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(adhesive compns. containing sulfur-containing silane coupling agents and acidic monomers suitable for use for dental repair)

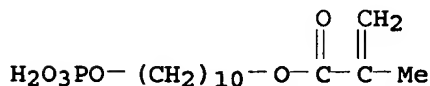
RN 118497-90-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with 3-(trimethoxysilyl)-1-propanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 85590-00-7

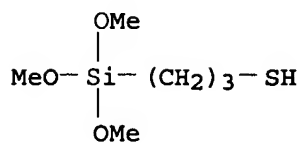
CMF C14 H27 O6 P



CM 2

CRN 4420-74-0  
CMF C6 H16 O3 S Si





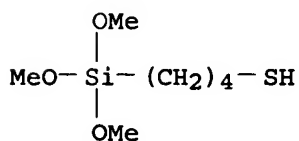
RN 395083-96-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with 4-(trimethoxysilyl)-1-butanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 100080-03-3

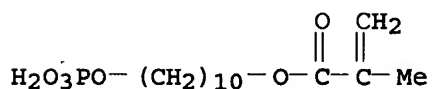
CMF C7 H18 O3 S Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



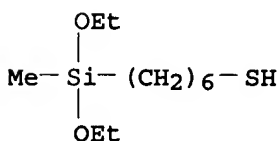
RN 395084-00-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with 6-(diethoxymethylsilyl)-1-hexanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 143099-68-7

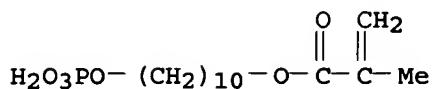
CMF C11 H26 O2 S Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



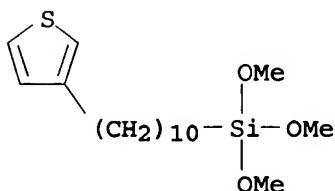
RN 395084-06-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with trimethoxy[10-(3-thienyl)decyl]silane (9CI) (CA INDEX NAME)

CM 1

CRN 395084-05-6

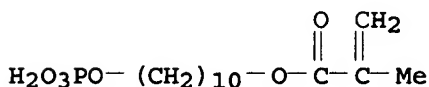
CMF C17 H32 O3 S Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



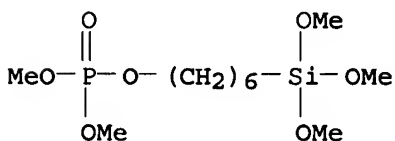
RN 395084-14-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with dimethyl 6-(trimethoxysilyl)hexyl phosphate (9CI) (CA INDEX NAME)

CM 1

CRN 395084-13-6

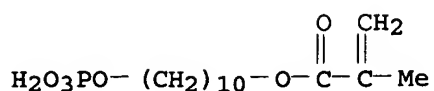
CMF C11 H27 O7 P Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



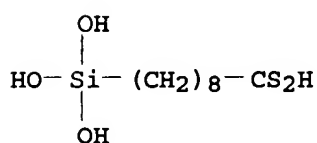
RN 395084-16-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with 9-(trihydroxysilyl)nonane(dithioic) acid (9CI) (CA INDEX NAME)

CM 1

CRN 395084-15-8

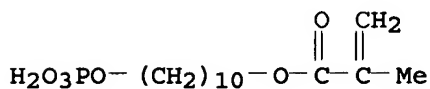
CMF C9 H20 O3 S2 Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



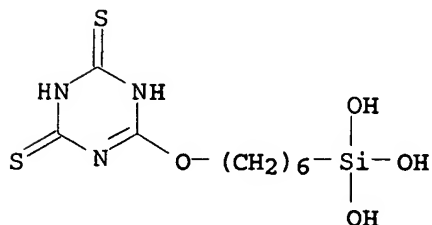
RN 395084-18-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with 6-[[6-(trihydroxysilyl)hexyl]oxy]-1,3,5-triazine-2,4(1H,3H)-dithione (9CI) (CA INDEX NAME)

CM 1

CRN 395084-17-0

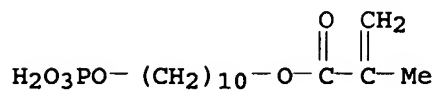
CMF C9 H17 N3 O4 S2 Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



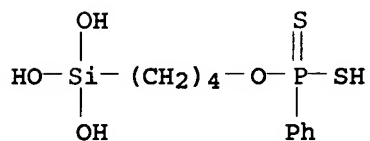
RN 395084-20-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with  
O-[4-(trihydroxysilyl)butyl] phenylphosphonodithioate (9CI) (CA INDEX  
NAME)

CM 1

CRN 395084-19-2

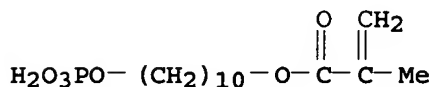
CMF C10 H17 O4 P S2 Si



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



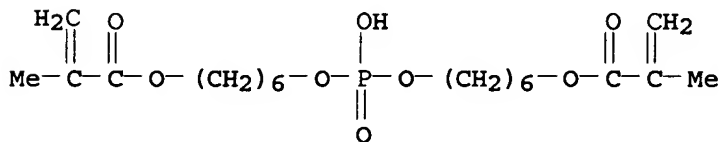
RN 395084-23-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, phosphinicobis(oxy-6,1-hexanediyl) ester,  
polymer with 3-(trimethoxysilyl)-1-propanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 118497-91-9

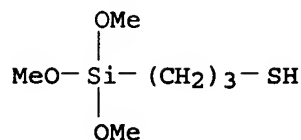
CMF C20 H35 O8 P



CM 2

CRN 4420-74-0

CMF C6 H16 O3 S Si



L33 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:194898 HCAPLUS

DN 134:242724

TI Adhesives for metal substrates

IN Nakatsuka, Kazumitsu

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 48 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2001072936  | A2   | 20010321 | JP 2000-151576  | 20000523 |
| PRAI | JP 1999-191302 | A    | 19990706 |                 |          |

AB This invention relates to adhesive compns. which have an excellent operability and a superior adhesion durability for precious metals or precious metal alloys, especially for dental metals. The adhesive compns. comprise (1) polymerizable monomers containing mercapto, sulfide, thioaldehyde, thioketone, thioacetal, or thiocarboxylate groups and (2) polymerizable group-containing silane coupling agents. For example, (10-mercaptodecyl 2-methyl-2-propenoate)-(11-metacryloyloxyundecyltrimethoxysilane) copolymer was prepared and its adhesion property was tested.

IC ICM C09J004-02

ICS A61K006-00; A61K006-083

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 35

ST dental adhesive sulfur contg methacrylate silane coupler

IT Dental materials and appliances

(adhesives; adhesives for metal substrates)

|    |              |              |              |              |              |
|----|--------------|--------------|--------------|--------------|--------------|
| IT | 330575-58-1P | 330575-59-2P | 330575-61-6P | 330575-62-7P | 330575-63-8P |
|    | 330575-64-9P | 330575-65-0P | 330575-66-1P | 330575-67-2P |              |
|    | 330575-68-3P | 330575-70-7P | 330575-72-9P | 330575-74-1P |              |
|    | 330575-76-3P | 330575-78-5P | 330575-80-9P | 330575-82-1P | 330575-84-3P |
|    | 330575-86-5P | 330575-87-6P | 330575-88-7P | 330575-89-8P | 330575-90-1P |
|    | 330575-91-2P | 330575-92-3P | 330575-93-4P | 330575-94-5P | 330575-95-6P |
|    | 330575-96-7P | 330575-99-0P | 330576-00-6P | 330576-01-7P | 330576-02-8P |
|    | 330576-03-9P | 330576-04-0P | 330576-05-1P | 330576-06-2P | 330576-07-3P |
|    | 330576-08-4P | 330576-09-5P | 330576-10-8P | 330576-11-9P | 330576-12-0P |
|    | 330576-13-1P | 330576-14-2P | 330576-15-3P | 330576-16-4P | 330576-17-5P |
|    | 330576-18-6P |              |              |              |              |

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(adhesives for metal substrates)

IT 330575-68-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(adhesives for metal substrates)

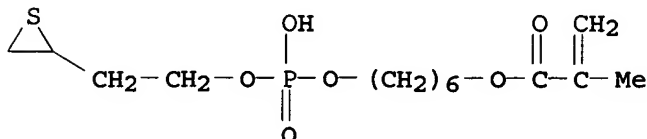
RN 330575-68-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 6-[[hydroxy(2-thiiranylethoxy)phosphinyl]oxy] hexyl ester, polymer with 11-(trimethoxysilyl)undecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 206988-77-4

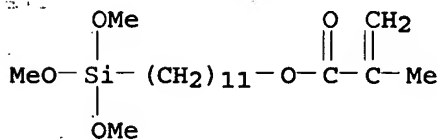
CMF C14 H25 O6 P S



CM 2

CRN 15289-99-3

CMF C18 H36 O5 Si



L33 ANSWER 17 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:697206 HCAPLUS

DN 133:271744

TI Bioactive prosthetic and dental cement compositions

IN Kitamura, Yoshiaki; Okunaga, Kiyoyuki; Yoshihara, Satoshi; Nagatoshi, Ken

PA Nippon Electric Glass Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2000271205 | A2   | 20001003 | JP 1999-85085   | 19990329 |
| PRAI | JP 1999-85085 |      | 19990329 |                 |          |

AB The comps. contain Ca-containing (crystallized) glass powders, methacrylate polymer powders, hydrophobic and hydrophilic methacrylate monomers, polymerization initiators, and polymerization accelerators. A composition containing Ca-containing

glass 50, poly(Me methacrylate) 30, Me methacrylate 19, and 4-(2-methacryloyloxyethyl)trimellitic acid 1 weight% was cured with benzoyl peroxide and dimethyl-p-toluidine to give a cement showing good compatibility with bone and flexural strength 100 and 85 MPa before and after 1-mo immersion in a physiol. saline.

IC ICM A61L024-00

ICS A61K006-033; A61K006-06; A61L027-00

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38, 57

ST bioactive cement calcium glass polymethacrylate; **dental** cement  
calcium glass ceramic polymethacrylate; bone cement calcium glass ceramic  
polymethacrylate

IT **Dental** materials and appliances  
(cements; bioactive cement compns. containing Ca-containing (crystallized) glass and  
methacrylates)

IT **Dental** materials and appliances  
(resins; bioactive cement compns. containing Ca-containing (crystallized) glass and  
methacrylates)

IT 26355-01-1P, 2-Hydroxyethyl methacrylate-methyl methacrylate copolymer  
68183-32-4P 71716-65-9P **86285-70-3P**  
RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic  
use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
(bioactive cement compns. containing Ca-containing (crystallized) glass and  
methacrylates)

IT **86285-70-3P**  
RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic  
use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
(bioactive cement compns. containing Ca-containing (crystallized) glass and  
methacrylates)

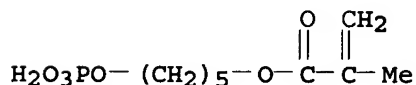
RN 86285-70-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
5-(phosphonooxy)pentyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85589-94-2

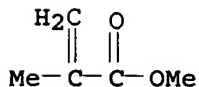
CMF C9 H17 O6 P



CM 2 :

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 18 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:420939 HCAPLUS

DN 131:78477

TI Polymerization catalysts containing organic sulfinatate salts for  
**dental** adhesives

IN Imakura, Takaaki; Kazama, Hideki; Oguri, Makoto

PA Tokuyama K. K., Japan; Tokuyama Corp.; Tokuyama Dental Corp.

SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

## FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 11181011    | A2   | 19990706 | JP 1997-349054  | 19971218 |
|      | JP 3536895     | B2   | 20040614 |                 |          |
| PRAI | JP 1997-349054 |      | 19971218 |                 |          |

AB Title catalysts with good storage stability in unsatd. monomers comprise (A) organic sulfinic acid salts and (B) ammonium salts and/or phosphonium salts other than their salts of organic sulfinic acids. Thus, a mixture of 2-hydroxyethyl methacrylate 1, Na p-toluenesulfinate (I) 0.01, and tri(2-hydroxyethyl)ammonium tetraphenylborate 0.02 g was kept at 37° for 6 mo to show 72% of remaining ratio of I. The mixture was treated with 1 g of bis(2-methacryloyloxyethyl) hydrogen phosphate to show curing time 118 s and 122 s for the fresh mixture and the mixture kept for 6 mo, resp.

IC ICM C08F004-00  
ICS A61K006-00; C08F002-46; C09J004-00

CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 35

ST polymn catalyst org sulfinate storage stability; dental adhesive polymn catalyst; sodium toluenesulfinate trihydroxyethylammonium tetraphenylborate polymn catalyst; hydroxyethyl methacrylate bismethacryloyloxyethyl hydrogen phosphate copolymer

IT Dental materials and appliances  
(adhesives; polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT Acids, uses  
RL: CAT (Catalyst use); USES (Uses)  
(in polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT Sulfinic acids  
RL: CAT (Catalyst use); USES (Uses)  
(organic, salts; polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT Polymerization catalysts  
(polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT Phosphonium compounds  
Quaternary ammonium compounds, uses  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT 7732-18-5, Water, uses  
RL: CAT (Catalyst use); USES (Uses)  
(in polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT 56-37-1, Benzyltriethylammonium chloride 824-79-3, Sodium p-toluenesulfinate 873-55-2, Sodium benzenesulfinate 10287-53-3, Ethyl N,N-dimethyl-p-aminobenzoate 10373-78-1, Camphorquinone 15525-15-2, Tetraphenylphosphonium tetraphenylborate 16844-27-2, Lithium p-toluenesulfinate 224791-74-6 229032-24-0 229032-25-1  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT 61778-44-7P, Bis(2-methacryloyloxyethyl) hydrogen phosphate-2-hydroxyethyl methacrylate copolymer 229032-26-2P, Bis(2-methacryloyloxyethyl) hydrogen phosphate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polymerization catalysts containing organic sulfinate salts with storage stability



in monomers for dental adhesives)

IT 80-62-6DP, Methyl methacrylate, polymer with hydroxyethyl methacrylate, bismethacryloyloxyethyl hydrogen phosphate, methacryoyloxyundecanedicarboxylic acid, and bis[(methacryoxyethoxy)phenyl]propane organic phosphinate 868-77-9DP, 2-Hydroxyethyl methacrylate, polymer with Me methacrylate, bismethacryloyloxyethyl hydrogen phosphate, methacryoyloxyundecanedicarboxylic acid, and bis[(methacryoxyethoxy)phenyl]propane organic phosphinate 24448-20-2DP, organic sulfinates, polymer with bismethacryloyloxyethyl hydrogen phosphate, methacryoyloxyundecanedicarboxylic acid, hydroxyethyl methacrylate, and Me methacrylate 32435-46-4DP, Bis(2-methacryloyloxyethyl) hydrogen phosphate, polymer with methacryoyloxyundecanedicarboxylic acid, bis(methacryloxyethoxy)phenylpropane organic sulfinate, hydroxyethyl methacrylate, and Me methacrylate 108362-85-2DP, 11-Methacryloyloxy-1,1-undecanedicarboxylic acid, polymer with bismethacryloyloxyethyl hydrogen phosphate, bis(methacryloxyethoxy)propane organic sulfinate, hydroxyethyl methacrylate, and Me methacrylate

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

IT 61778-44-7P, Bis(2-methacryloyloxyethyl) hydrogen phosphate-2-hydroxyethyl methacrylate copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)

(polymerization catalysts containing organic sulfinate salts with storage stability in monomers for dental adhesives)

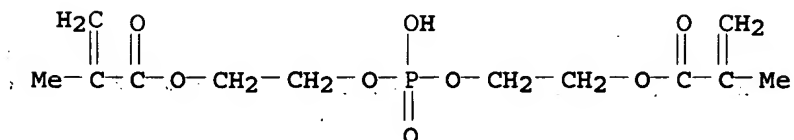
RN 61778-44-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with phosphinobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 32435-46-4

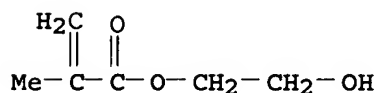
CMF C12 H19 O8 P



CM 2

CRN 868-77-9

CMF C6 H10 O3



L33 ANSWER 19 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1999:225672 HCAPLUS  
DN 130:329227

TI Vinyl group-containing disulfides and metal surface treating agents containing them

IN Kimura, Mikio; Aizawa, Masayuki

PA Tokuyama K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 34 pp.

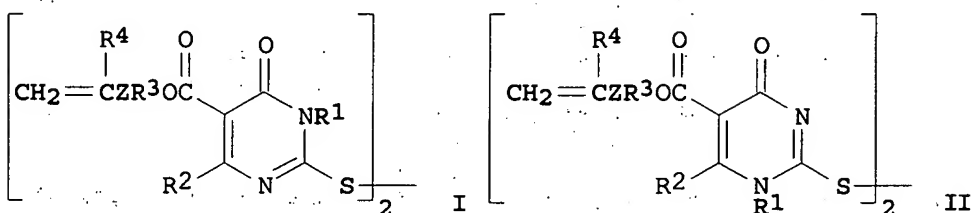
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 11092461       | A2   | 19990406 | JP 1997-255560  | 19970919 |
| PRAI | JP 1997-255560    |      | 19970919 |                 |          |
| OS   | MARPAT 130:329227 |      |          |                 |          |
| GI   |                   |      |          |                 |          |



AB The disulfides I [R1 = H, alkyl; R2 = H, alkyl, Ph; R3 = C2-12 hydrocarbylene, (CH2CH2O)nCH2CH2 (n = 1-5), (CH2)o(SiMe2O)SiMe2(CH2)p (o, p = 1-10; q = 1-5), p-(CH2)rC6H4(CH2)s (r, s = 1-5); Z = CO2, CH2O, C6H4CH2O] or II (R1-R4 = same as above) are prepared. The metal surface treating agents contain I or II, organic solvents, and optionally acidic group-containing polymerizable monomers. The treating agents are especially useful for adhesion between **dental** materials comprising noble metals (alloys) and photocurable resins or between the metals (alloys) and another metals (alloys), ceramics, resins, etc., via photocurable compns. Coating of a polished and sand-blasted Kinpara 12 (**dental** Au-Ag-Pd alloy) or pure Au plate with a toluene solution of I (R1 = R2 = H, ZR3 = CO2CH2CH2, R4 = Me) (preparation given) enhanced adhesion to a SUS304 stick through a resin cement.

IC ICM C07D239-56

ICS C07F007-18; C09J005-02; A61K006-00

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38

ST vinyl contg disulfide prepn **dental** primer; adhesive **dental** polymerizable thiouracil disulfide dimer; noble metal adhesion **dental** polymerizable disulfide

IT **Dental** materials and appliances

(adhesives; preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between **dental** alloys and resins)

IT **Dental** materials and appliances

(alloys; preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between **dental** alloys and resins)

IT **Dental** materials and appliances

(primers; preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between **dental** alloys and resins)

- IT Dental materials and appliances  
(resins; preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)
- IT 223510-21-2P  
RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resin)
- IT 222850-42-2P 222850-46-6P 222850-52-4P  
RL: PNU (Preparation, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resin)
- IT 223510-23-4P 223510-24-5P 223510-25-6P 223510-27-8P  
223510-28-9P 223510-30-3P 223510-32-5P 223510-34-7P 223510-37-0P  
223510-38-1P 223510-40-5P 223510-42-7P 223510-44-9P 223510-47-2P  
RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)
- IT 112-47-0P, 1,10-Decanediol 2351-43-1P, Diethylene glycol monomethacrylate 7506-89-0P 10095-14-4P, 6-Hydroxyhexyl acrylate 13092-57-4P, 6-Hydroxyhexyl methacrylate 13463-71-3P 33267-96-8P 56927-66-3P, 10-Hydroxydecyl methacrylate 87949-15-3P 146293-07-4P 154229-52-4P 179745-18-7P 198623-07-3P 198623-08-4P 198623-09-5P 198623-10-8P 198623-11-9P 198623-12-0P 198623-13-1P 198623-14-2P 198623-15-3P 198623-17-5P 198623-18-6P 198623-19-7P 198623-23-3P 198623-24-4P 198623-25-5P 198623-26-6P 198623-27-7P 198623-28-8P 198623-29-9P 198623-33-5P 198623-34-6P 220416-63-7P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)
- IT 222850-40-0P 222850-41-1P 222850-43-3P 222850-44-4P 222850-45-5P 222850-47-7P 222850-48-8P 222850-49-9P 222850-50-2P 222850-51-3P 222850-53-5P  
RL: PNU (Preparation, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)
- IT 87-13-8, Diethyl ethoxymethylenemalonate 105-53-3, Diethyl malonate 111-46-6, Diethylene glycol, reactions 115-80-0, Triethyl orthopropionate 126-30-7, 2,2-Dimethyl-1,3-propanediol 589-29-7, p-Xylene glycol 598-52-7, Methylthiourea 629-11-8, 1,6-Hexanediol 868-77-9, 2-Hydroxyethyl methacrylate 928-40-5, 1-Methyl-1,5-pentanediol 1663-61-2, Triethyl orthobenzoate 18001-97-3 23945-50-8, 5-Carboxy-2-thiouracil 30030-25-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)
- IT 7440-57-5, Gold, biological studies 92046-83-8, Kinpara 12

111743-88-5, Wachrom

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)

IT 223510-27-8P

RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of vinyl group-containing disulfides and metal surface treating agents containing them for adhesion between dental alloys and resins)

RN 223510-27-8 HCAPLUS

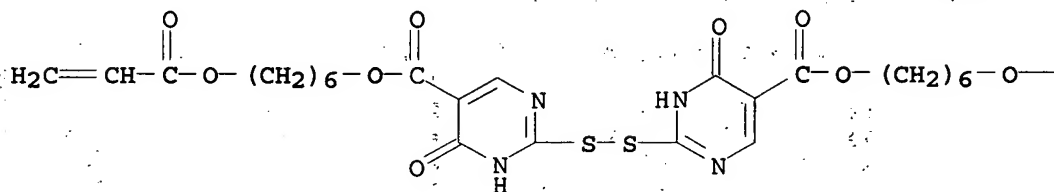
CN 5-Pyrimidinecarboxylic acid, 2,2'-dithiobis[1,4-dihydro-4-oxo-,  
 bis[6-[(1-oxo-2-propenyl)oxy]hexyl] ester, polymer with  
 10-(phosphonoxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

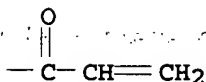
CRN 222850-43-3

CMF C28 H34 N4 O10 S2

PAGE 1-A



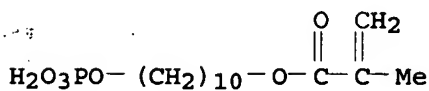
PAGE 1-B



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



L33 ANSWER 20 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:142314 HCAPLUS

DN 130:242360

TI Aromatic amine-free room-temperature-curable polymer compositions for  
 dental restoration, coatings, etc.

IN Ogura, Hideo; Miyakawa, Ikuro; Somchai, Urapepon; Honda, Shigemichi

PA San Medical K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | JP 11060427  | A2   | 19990302 | JP 1997-219488  | 19970814 |
| PRAI | JP 1997-219488   |      | 19970814 |                 |          |
| AB   | The comps. contain (A) acidic compds., (B) metals, (C) peroxides, and (D) monomers at content of (A) 0.001-50 parts per 100 parts (B), content of (C) 0.001-10 parts per 100 parts (D), and (B)/(D) weight ratio 99:1-1:99. Cu (0.35 g) was added to a mixture (0.15 g) containing 1,6-bis(methacryloxyethyloxycarbonylamino)-2,2,4(2,4,4)-trimethylhexane 100, Bz2O2 1, and 4-methacryloxyethyltrimellitic anhydride 1.5 parts to cure within 0.9 min.  |      |          |                 |          |
| IC   | ICM A61K006-08<br>ICS A61K006-083; C08F002-44; C08F004-34; C08F020-04; C08F020-10; C09D004-02; C09D133-02; C09D133-06  |      |          |                 |          |
| CC   | 63-7 (Pharmaceuticals)<br>Section cross-reference(s): 42   |      |          |                 |          |
| ST   | room temp curable dental polymer compn; metal room temp curable dental polymer; methacryloxyethyltrimellitic anhydride room temp curable polymer; peroxide room temp curable dental polymer  |      |          |                 |          |
| IT   | Polymerization catalysts<br>(aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating)   |      |          |                 |          |
| IT   | Peroxides, uses<br>RL: CAT (Catalyst use); USES (Uses)<br>(aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating)   |      |          |                 |          |
| IT   | Dental materials and appliances<br>(fillings; aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating)  |      |          |                 |          |
| IT   | Dental materials and appliances<br>(resins; aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating)  |      |          |                 |          |
| IT   | Coating materials<br>(room-temperature-curable; aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating)  |      |          |                 |          |
| IT   | 94-36-0, Benzoyl peroxide, uses 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7439-96-5, Manganese, uses 7439-98-7, Molybdenum, uses 7440-02-0, Nickel, uses 7440-22-4, Silver, uses 7440-31-5, Tin, uses 7440-32-6, Titanium, uses 7440-47-3, Chromium, uses 7440-50-8, Copper, uses 7440-55-3, Gallium, uses 7440-66-6, Zinc, uses 7440-67-7, Zirconium, uses 7440-74-6, Indium, uses<br>RL: CAT (Catalyst use); USES (Uses)<br>(aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating) |      |          |                 |          |
| IT   | 221391-45-3P 221391-46-4P 221391-47-5P<br>RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)<br>(aromatic amine-free room-temperature-curable polymer compns. containing acidic  |      |          |                 |          |

vinyl compds., metals, and peroxides for dental restoration and coating)

IT 221391-47-5P

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(aromatic amine-free room-temperature-curable polymer compns. containing acidic vinyl compds., metals, and peroxides for dental restoration and coating)

RN 221391-47-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl ester, polymer with 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

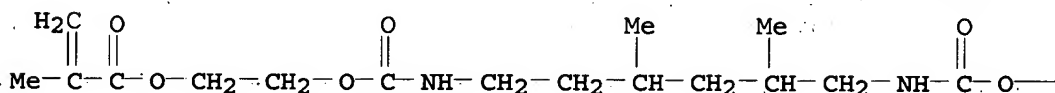
CM 1

CRN 72869-86-4

CMF C23 H38 N2 O8

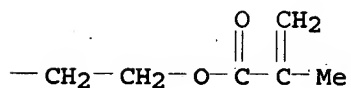
CCI IDS

PAGE 1-A



D1-Me

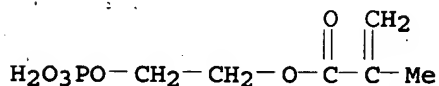
PAGE 1-B



CM 2

CRN 24599-21-1

CMF C6 H11 O6 P



L33 ANSWER 21 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:77456 HCAPLUS  
 DN 130:158446  
 TI Dental resin cements having improved handling properties  
 IN Ario, Paul D.; Aasen, Steven M.; Holmes, Brian N.  
 PA Minnesota Mining and Manufacturing Company, USA  
 SO PCT Int. Appl., 41 pp.  
 CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE     |
|------|--|------|----------|--|----------|
| PI   | WO 9903444   | A1   | 19990128 | WO 1997-US22182  | 19971203 |
|      | W:   |      |          | AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |
|      | RW:  |      |          | GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG   |          |
|      | US 6506816   | B1   | 20030114 | US 1997-896549   | 19970717 |
|      | CA 2295502   | AA   | 19990128 | CA 1997-2295502  | 19971203 |
|      | AU 9855161   | A1   | 19990210 | AU 1998-55161  | 19971203 |
|      | EP 998252  | A1   | 20000510 | EP 1997-951546   | 19971203 |
|      | R:   |      |          | DE, FR, GB, IT   |          |
|      | JP 2001510146  | T2   | 20010731 | JP 2000-502747   | 19971203 |
|      | US 2003114554  | A1   | 20030619 | US 2002-315505   | 20021210 |
|      | US 6939900   | B2   | 20050906 |  |          |
| PRAI | US 1997-896549   | A    | 19970717 |  |          |
|      | WO 1997-US22182  | W    | 19971203 |  |          |
| AB   | Dental resin cement materials having unique handling properties are provided that comprise (a) fillers, (b) polymerizable resins, and (c) a polymeric handling modifier that is dispersed in the polymerizable resin at 25° and that has a mol. weight of 500-100,000. Components (a), (b) and (c) are present in an amount effective to achieve a viscosity vs. shear rate curve that fits a power law model of $F(x) = Ax^B$ . The correlation value of the material to this curve is greater than 0.85 for both the increasing and decreasing shear rate curves, and the value of B is less than about -0.01. Resin cements are also provided that comprise acid functionality and water, but which do not comprise an acid reactive filler. Such cements may be self etching, thereby avoiding the need to carry out a sep. acid etching step. A cement contained 3.75 % methacrylate urethane group-terminated polycaprolactone, 14.6 % triethyleneglycol dimethacrylate, 14.6 % Bis-GMA, and 68 % a blend of silanol-treated zirconia/silica and a silanol-treated silica. |      |          |  |          |
| IC   | ICM A61K006-083  |      |          |  |          |
|      | ICS A61K006-087  |      |          |  |          |
| CC   | 63-7 (Pharmaceuticals)   |      |          |  |          |
| ST   | dental cement methacrylate modified polycaprolactone   |      |          |  |          |
| IT   | Polyesters, biological studies   |      |          |  |          |
|      | RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  |      |          |  |          |
|      | (acrylic; dental resin cements having improved handling properties)  |      |          |  |          |
| IT   | Glass, biological studies  |      |          |  |          |
|      | RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)   |      |          |  |          |
|      | (as filler; dental resin cements having improved handling properties)  |      |          |  |          |
| IT   | Dental materials and appliances  |      |          |  |          |
|      | (cements; dental resin cements having improved handling properties)  |      |          |  |          |
| IT   | Shear viscosity  |      |          |  |          |
|      | (dental resin cements having improved handling properties)   |      |          |  |          |
| IT   | 1314-23-4, Zirconia, biological studies  |      |          | 7631-86-9, Silica, biological studies  |          |

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(as filler; dental resin cements having improved handling properties)

IT 25101-31-9P, Triethylene glycol dimethacrylate homopolymer 26426-05-1P, Bis-GMA-triethylene glycol dimethacrylate copolymer 61778-45-8P 101181-05-9P, Bis-GMA-2-hydroxyethyl methacrylate copolymer 168061-62-9P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dental resin cements having improved handling properties)

IT 30757-19-8P, Bis-GMA polymer 64696-13-5P, Ethoxylated bisphenol A dimethacrylate homopolymer 88849-63-2P 220182-23-0P

RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dental resin cements having improved handling properties)

IT 9003-17-2D, Polybutadiene, hydroxyl-endcapped 24980-41-4, Polycaprolactone 25068-38-6, Bisphenol A-epichlorohydrin copolymer 25190-06-1 25248-42-4, Polycaprolactone 220204-61-5

RL: POF (Polymer in formulation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dental resin cements having improved handling properties)

IT 2530-85-0

RL: TEM (Technical or engineered material use); THU (Therapeutic use);

BIOL (Biological study); USES (Uses)

(inorg. filler treatment with; dental resin cements having improved handling properties)

IT 61778-45-8P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dental resin cements having improved handling properties)

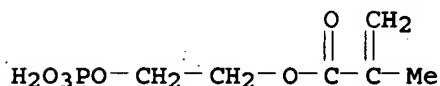
RN 61778-45-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-(phosphonoxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

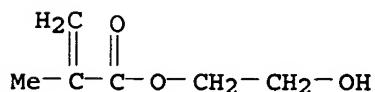
CMF C6 H11 O6 P



CM 2

CRN 868-77-9

CMF C6 H10 O3



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD



## ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 22 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1998:424098 HCAPLUS

DN 129:100082

TI Coating compositions for teeth

IN Yamagishi, Atsushi; Oshima, Akira; Kayane, Shigeto; Nakano, Yukihiro

PA Kao Corp., Japan

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | WO 9826749   | A1   | 19980625 | WO 1997-JP4533  | 19971210 |
|      | W: CN, JP, US  |      |          |                 |          |
|      | RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |          |
|      | EP 897709  | A1   | 19990224 | EP 1997-947871  | 19971210 |
|      | R: DE, ES, FR, GB  |      |          |                 |          |
|      | CN 1211915   | A    | 19990324 | CN 1997-192392  | 19971210 |
|      | CN 1104230   | B    | 20030402 |                 |          |
|      | US 6048913   | A    | 20000411 | US 1998-125420  | 19980817 |
| PRAI | JP 1996-339653   | A    | 19961219 |                 |          |
|      | WO 1997-JP4533   | W    | 19971210 |                 |          |

AB Disclosed is a coating composition for teeth, which comprises a polymer containing one or more phosphorus acid residues selected among phosphoric acid, phosphonic acid, phosphinic acid, halides of them and salts of them in the mol. and having an average mol. weight of 10,000 to 5,000,000 and water or a lower alc. This composition is not easily peeled off by eating or drinking, but it can be easily removed, if necessary, and is safe. The coating may inhibit formation of dental caries, plaque, calculi, hypersensitivities, and endodontitis. For example, 2-methacryloyloxyethyl acid phosphate-Et methacrylate copolymer (20 g) was prepared and mixed with 1 g titania, 1 g mica titanium, and 78 g ethanol to obtain a coating composition

IC ICM A61K006-08

CC 63-7 (Pharmaceuticals)

IT Dental materials and appliances

(phosphorus-containing polymers for coating compns. for teeth)

IT 38742-68-6P 209518-41-2P 209518-42-3P 209518-44-5P  
 209518-45-6P 209518-47-8P 209518-49-0P 209518-51-4P 209518-52-5P  
 209518-53-6P 209518-54-7P 209518-56-9P 209588-62-5P

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(phosphorus-containing polymers for coating compns. for teeth)

IT 38742-68-6P 209518-56-9P

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(phosphorus-containing polymers for coating compns. for teeth)

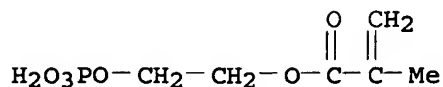
RN 38742-68-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with  
 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

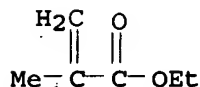
CMF C6 H11 O6 P



CM 2

CRN 97-63-2

CMF C6 H10 O2



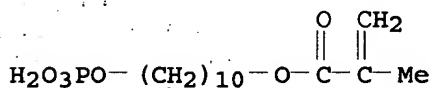
RN 209518-56-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with  
10-(phosphonooxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85590-00-7

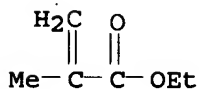
CMF C14 H27 O6 P



CM 2

CRN 97-63-2

CMF C6 H10 O2

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 23 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:762372 HCAPLUS

DN 128:66535

TI Dental adhesive compositions containing acidic monomers,  
arylborates, and fillers with good adhesion to dentin

IN Oguri, Makoto; Kazama, Hideki; Sato, Takeshi

PA Tokuyama Soda Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

-----

PI JP 09309811 A2 19971202 JP 1996-127446 19960522

PRAI JP 1996-127446 19960522

AB The title compns. contain acidic group-containing monomers 100, arylborates 0.01-20, and fillers 50-900 parts. The compns. can contain other polymerizable monomers. 2-Methacryloyloxyethyl dihydrogen phosphate 30, Ph4BNa 3, and  $\gamma$ -methacryloxypropyltrimethoxysilane-treated pulverized quartz 70 g were mixed to show adhesion strength 18.1 MPa to dental enamel.

IC ICM A61K006-00  
ICS C09J004-00

CC 63-7 (Pharmaceuticals)

ST dental adhesive acidic monomer arylborate filler; polymn initiator phenylborate methacryloyloxyethyl phosphate dental; quartz filler dental methacryloyloxyethyl phosphate tetraphenylborate

IT Dental materials and appliances  
(adhesives; dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT Fillers  
Polymerization catalysts  
(dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT Aluminosilicate glasses  
Aluminosilicate glasses  
Fluoride glasses  
Fluoride glasses  
RL: MOA (Modifier or additive use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(fluoroaluminosilicate; dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT 26426-05-1  
RL: MOA (Modifier or additive use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composites with silica-zirconia; dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT 143-66-8, Sodium tetraphenylborate 14680-77-4 14740-54-6 25776-12-9  
79060-88-1 135998-36-6 184591-56-8 184591-57-9 184591-58-0  
184591-59-1 184591-61-5 184591-62-6 184591-63-7 184591-65-9  
184591-66-0 198016-86-3 200191-02-2  
RL: CAT (Catalyst use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT 51131-63-6P 120881-18-7P 169048-29-7P 178935-19-8P  
200191-03-3P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT 1314-23-4, Zirconia, biological studies 7631-86-9, Silica, biological studies 14808-60-7, Quartz, biological studies  
RL: MOA (Modifier or additive use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to dentin)

IT 178935-19-8P 200191-03-3P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
(dental adhesive compns. containing acidic monomers, arylborates, and fillers with good adhesion to **dentin**)

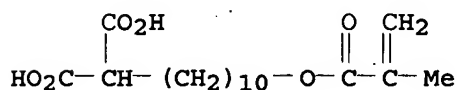
RN 178935-19-8 HCAPLUS

CN Propanedioic acid, [10-[(2-methyl-1-oxo-2-propenyl)oxy]decyl]-, polymer with phosphinicobis(oxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 108362-85-2

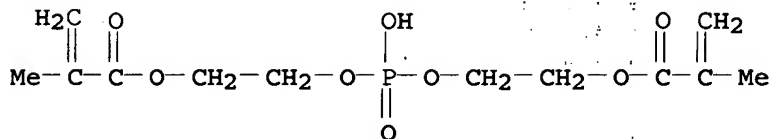
CMF C17 H28 O6



CM 2

CRN 32435-46-4

CMF C12 H19 O8 P



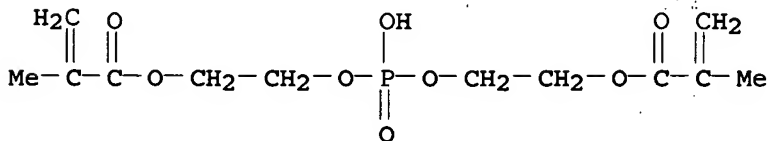
RN 200191-03-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, phosphinicobis(oxy-2,1-ethanediyl) ester, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 32435-46-4

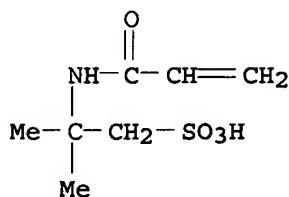
CMF C12 H19 O8 P



CM 2

CRN 15214-89-8

CMF C7 H13 N O4 S



L33 ANSWER 24 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:754278 HCAPLUS

DN 128:53298

TI Two-component dental primer composition using ether solvents

IN Fuchigami, Satoshi; Nakagawa, Hiroyuki; Ono, Hideki

PA Tokuyama Soda Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 09301817    | A2   | 19971125 | JP 1996-122939  | 19960517 |
| PRAI | JP 1996-122939 |      | 19960517 |                 |          |

AB The composition, used to improve adhesion of adhesives in application of dental fillings, comprise a solution of polymerizable monomers having acidic group dissolved in water-soluble ethers having no OH group and a water-based solution The composition may addnl. contain polymerization accelerators.

A

primer A containing 2-methacryloyloxyethyl Ph hydrogen phosphate and 1,2-dimethoxyethane and a primer B containing H<sub>2</sub>O and NaBPh<sub>4</sub> were mixed and applied onto dentin surface of a bovine tooth prior to application of a bonding material and a dental composite resin to show adhesion between the dentin and the composite resin 20.3 MPa, and the adhesion was not decreased even when primers A and B were used after storage at 37° for 4 wk.

IC ICM A61K006-083

CC 63-7 (Pharmaceuticals)

ST dental adhesive primer compn ether solvent; acidic monomer

dental adhesive primer solvent

IT Dental materials and appliances

(primers; storage-stable two-component dental primer composition using ether solvents for acidic monomers)

IT Ethers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(storage-stable two-component dental primer composition using ether solvents for acidic monomers)

IT 125336-73-4P 178935-18-7P 178935-22-3P 188021-51-4P

200118-61-2P 200118-62-3P 200118-63-4P 200118-64-5P

RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(storage-stable two-component dental primer composition using ether solvents for acidic monomers)

IT 24599-21-1 32435-46-4 64716-34-3, 2-Methacryloyloxyethyl phenyl hydrogen phosphate 108362-85-2, 11-Methacryloyloxy-1,1-undecanedicarboxylic acid 144571-65-3

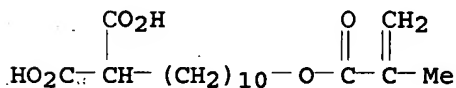
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

(storage-stable two-component dental primer composition using

ether solvents for acidic monomers)  
 IT 109-99-9, biological studies 110-71-4, 1,2-Dimethoxyethane 111-96-6,  
 Bis(2-methoxyethyl) ether 45314-30-5, Nonaethylene glycol dimethacrylate  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (storage-stable two-component dental primer composition using  
 ether solvents for acidic monomers)  
 IT 178935-18-7P 178935-22-3P  
 RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (storage-stable two-component dental primer composition using  
 ether solvents for acidic monomers)  
 RN 178935-18-7 HCAPLUS  
 CN Propanedioic acid, [10-[(2-methyl-1-oxo-2-propenyl)oxy]decyl]-, polymer  
 with 2-[(hydroxyphenoxyphosphinyl)oxy]ethyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

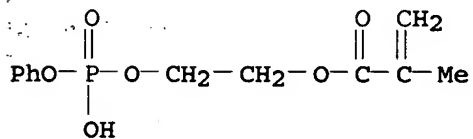
CM 1

CRN 108362-85-2  
 CMF C17 H28 O6



CM 2

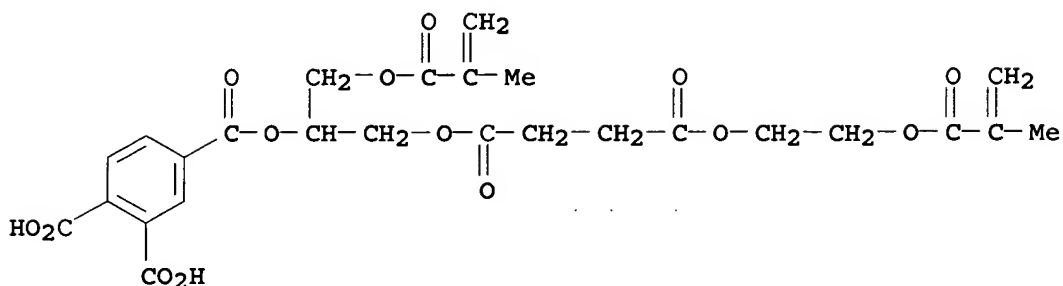
CRN 64716-34-3  
 CMF C12 H15 O6 P



RN 178935-22-3 HCAPLUS  
 CN 1,2,4-Benzenetricarboxylic acid, 4-[2-[4-[2-[(2-methyl-1-oxo-2-  
 propenyl)oxy]ethoxy]-1,4-dioxobutoxy]-1-[[2-methyl-1-oxo-2-  
 propenyl)oxymethyl]ethyl] ester, polymer with 2-  
 [(hydroxyphenoxyphosphinyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA  
 INDEX NAME)

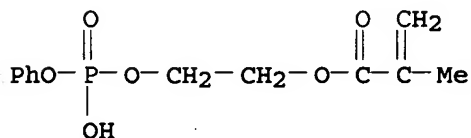
CM 1

CRN 144571-65-3  
 CMF C26 H28 O14



CM 2

CRN 64716-34-3  
CMF C12 H15 O6 P



L33 ANSWER 25 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:502175 HCAPLUS

DN 127:126681

TI Dual cure-type dental adhesive sets

IN Yamada, Hideaki; Ishii, Michiko

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 09157126    | A2   | 19970617 | JP 1995-324927  | 19951214 |
|      | JP 3449844     | B2   | 20030922 |                 |          |
| PRAI | JP 1995-324927 |      | 19951214 |                 |          |

AB Dual cure-type dental adhesive sets comprise a primer composition containing acidic group-containing radical polymerizable monomers and alc. OH group-containing radical polymerizable monomers and sulfinic acid or its salts in sep. package. The sets also comprise a bonding composition containing radical polymerizable monomers and photopolymn. initiators and at least carboxylic acids and reducing agents are in sep. package.

ICM A61K006-08

ICS A61K006-083

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38

ST dual cure dental adhesive copolymer

IT Dental materials and appliances

(adhesives; dual cure-type dental adhesive sets)

IT Polymers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(co-; dual cure-type dental adhesive sets)

IT 192806-84-1P 192806-87-4P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dual cure-type dental adhesive sets)

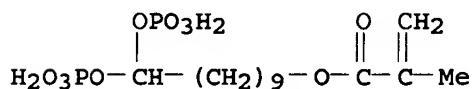
IT 94-36-0, Benzoyl peroxide, biological studies 3077-12-1,  
 N,N-Diethanol-p-toluidine 10373-78-1, Camphoquinone 21245-01-2  
 133897-28-6  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dual cure-type dental adhesive sets)

IT 192806-84-1P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (dual cure-type dental adhesive sets)

RN 192806-84-1 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 10,10-bis(phosphonooxy)decyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

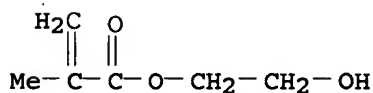
CM 1

CRN 192806-83-0  
 CMF C14 H28 O10 P2



CM 2

CRN 868-77-9  
 CMF C6 H10 O3



L33 ANSWER 26 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1997:502173 HCAPLUS  
 DN 127:126680  
 TI Dental adhesive sets  
 IN Yamada, Hideaki; Ishii, Michiko  
 PA Kuraray Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | JP 09157124   | A2   | 19970617 | JP 1995-321343  | 19951211 |
|      | JP 3449843  | B2   | 20030922 |                 |          |
| PRAI | JP 1995-321343  |      | 19951211 |                 |          |
| AB   | Dental adhesive sets which effectively control initial polymerization rates comprise a primer composition containing acidic group-containing radical polymerizable monomers, alc. OH group-containing radical polymerizable |      |          |                 |          |

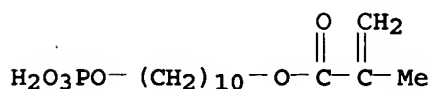


monomers and water and sulfinic acid or its salts in sep. package [i.e. containing no acidic radical polymerizable monomers]. The sets also comprise a bonding composition containing radical polymerizable monomers, acidic radical polymerizable monomers and alc. OH group-containing radical polymerizable monomers and at least carboxylic acids and reducing agents are in sep. package.

IC ICM A61K006-00  
ICS A61K006-08; C09J005-04  
CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 38  
ST dual cure dental adhesive copolymer  
IT Dental materials and appliances  
(adhesives; dental adhesive sets)  
IT Polymers, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(co-; dental adhesive sets)  
IT 146894-54-4P 159897-16-2P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental adhesive sets)  
IT 94-36-0, Benzoyl peroxide, biological studies 3077-12-1,  
N,N-Diethanol-p-toluidine 60199-16-8  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(dental adhesive sets)  
IT 159897-16-2P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental adhesive sets)  
RN 159897-16-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
10-(phosphonoxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

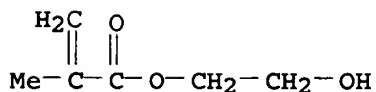
CM 1

CRN 85590-00-7  
CMF C14 H27 O6 P



CM 2

CRN 868-77-9  
CMF C6 H10 O3



L33 ANSWER 27 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1997:328771 HCAPLUS  
DN 126:306272  
TI Adhesives for metals

IN Kadoma, Yoshinori; Kojima, Katsunori; Kawashima, Mitsunobu; Nakatsuka, Kazumitsu  
 PA Kuraray Co, Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | JP 09067546   | A2   | 19970311 | JP 1995-226898  | 19950904 |
|      | JP 3517041  | B2   | 20040405 |                 |          |
| PRAI | JP 1995-226898  |      | 19950904 |                 |          |
| OS   | MARPAT 126:306272   |      |          |                 |          |
| AB   | Adhesives useful for dental uses are prepared from vinyl monomers containing 1,3,5-triazine-2,4-dithiol or -dithion groups and vinyl monomers containing phosphate groups or carboxylic groups. Thus, an adhesive for an Au alloy contained propyl-4-vinylbenzyl-6-(1,3,5-triazine-2,4-dithiol)amine 0.5, phosphonodecyl methacrylate 1, and acetone 100 parts. |      |          |                 |          |
| IC   | ICM C09J004-00  |      |          |                 |          |
|      | ICS C09J004-02  |      |          |                 |          |
| CC   | 38-3 (Plastics Fabrication and Uses)<br>Section cross-reference(s): 56, 63  |      |          |                 |          |
| IT   | Thiols (organic), reactions<br>RL: RCT (Reactant); RACT (Reactant or reagent)<br>(adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)  |      |          |                 |          |
| IT   | Alloys, uses<br>RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)<br>(adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)  |      |          |                 |          |
| IT   | Dental materials and appliances<br>(adhesives; adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)   |      |          |                 |          |
| IT   | Heterocyclic compounds<br>RL: RCT (Reactant); RACT (Reactant or reagent)<br>(nitrogen; adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)   |      |          |                 |          |
| IT   | Vinyl compounds, uses<br>RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)<br>(polymers; adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)                 |      |          |                 |          |
| IT   | Gold alloy<br>Palladium alloy<br>Silver alloy<br>RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)<br>(adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)   |      |          |                 |          |
| IT   | 189167-74-6P 189167-75-7P 189167-77-9P<br>189167-79-1P 189167-80-4P 189167-82-6P  |      |          |                 |          |

189167-84-8P 189167-85-9P 189167-87-1P 189167-88-2P  
 189167-89-3P 189167-90-6P 189167-91-7P 189167-93-9P  
 189167-94-0P 189167-95-1P 189167-97-3P 189167-99-5P 189168-01-2P  
 189168-03-4P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)

IT 66992-72-1, Casting Gold M.C. Type IV 93123-80-9, Castwell M.C. 125373-16-2, Sunsilver C.B.

RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)

IT 189167-74-6P 189167-75-7P 189167-77-9P  
 189167-79-1P 189167-80-4P 189167-82-6P  
 189167-84-8P 189167-89-3P 189167-90-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(adhesives for metals containing polymers having mercaptotriazine groups and phosphate groups and carboxylic groups useful for dental uses)

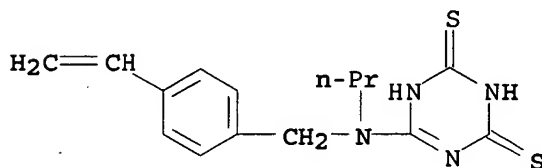
RN 189167-74-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonoxy)decyl ester, polymer with 6-[[[(4-ethenylphenyl)methyl]propylamino]-1,3,5-triazine-2,4(1H,3H)-dithione (9CI) (CA INDEX NAME)

CM 1

CRN 88373-30-2

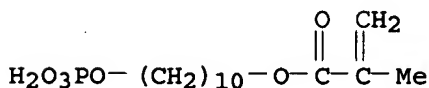
CMF C15 H18 N4 S2



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



RN 189167-75-7 HCAPLUS

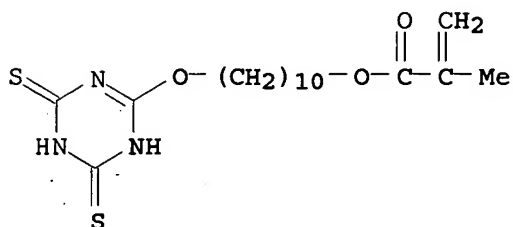
CN 2-Propenoic acid, 2-methyl-, 10-(phosphonoxy)decyl ester, polymer with 10-[(3,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)oxy]decyl

2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 114645-91-9

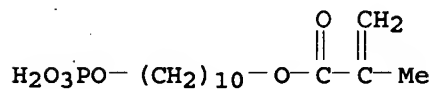
CMF C17 H27 N3 O3 S2



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



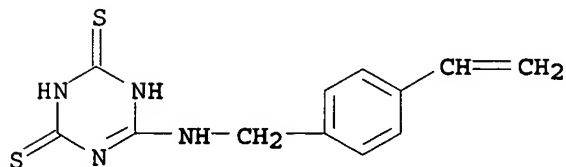
RN 189167-77-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonoxy)decyl ester, polymer with 6-[[[4-ethenylphenyl)methyl]amino]-1,3,5-triazine-2,4(1H,3H)-dithione (9CI) (CA INDEX NAME)

CM 1

CRN 189167-76-8

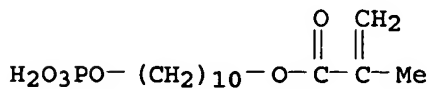
CMF C12 H12 N4 S2



CM 2

CRN 85590-00-7

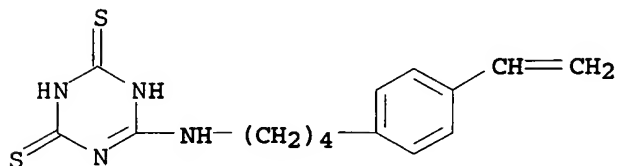
CMF C14 H27 O6 P



RN 189167-79-1 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with  
 6-[[4-(4-ethenylphenyl)butyl]amino]-1,3,5-triazine-2,4(1H,3H)-dithione  
 (9CI) (CA INDEX NAME)

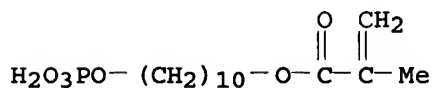
CM 1

CRN 189167-78-0  
 CMF C15 H18 N4 S2



CM 2

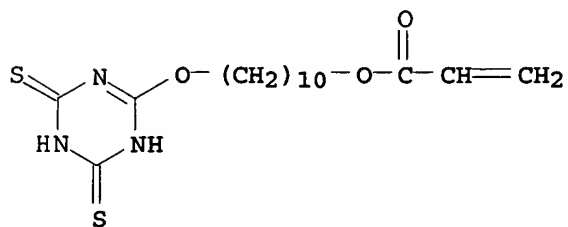
CRN 85590-00-7  
 CMF C14 H27 O6 P



RN 189167-80-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with  
 10-[(3,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)oxy]decyl  
 2-propenoate (9CI) (CA INDEX NAME)

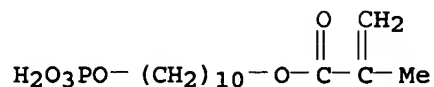
CM 1

CRN 114645-92-0  
 CMF C16 H25 N3 O3 S2



CM 2

CRN 85590-00-7  
 CMF C14 H27 O6 P



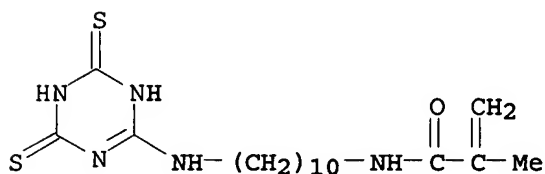
RN 189167-82-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with  
2-methyl-N-[10-[(1,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)amino]decyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 189167-81-5

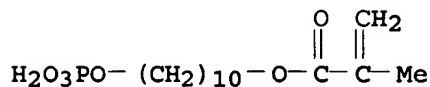
CMF C17 H29 N5 O S2



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



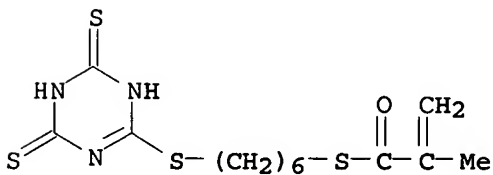
RN 189167-84-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 10-(phosphonooxy)decyl ester, polymer with  
S-[6-[(1,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)thio]hexyl]  
2-methyl-2-propenethioate (9CI) (CA INDEX NAME)

CM 1

CRN 189167-83-7

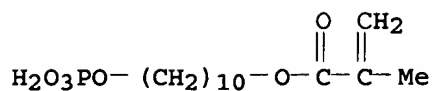
CMF C13 H19 N3 O S4



CM 2

CRN 85590-00-7

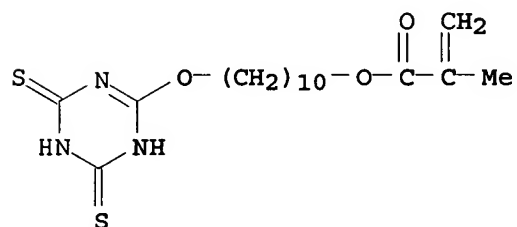
CMF C14 H27 O6 P



RN 189167-89-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 4,6-dihydroxy-4,6-dioxido-3,5,7-trioxa-4,6-diphosphanonane-1,9-diyl ester, polymer with 10-[(3,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)oxy]decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

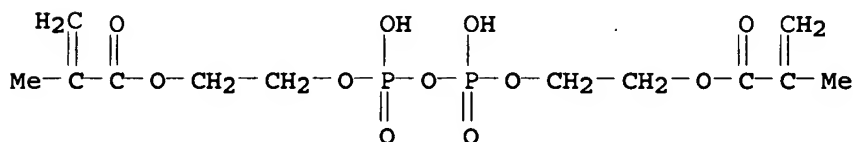
CM 1

CRN 114645-91-9  
 CMF C17 H27 N3 O3 S2



CM 2

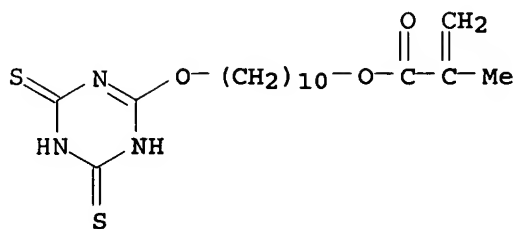
CRN 61988-50-9  
 CMF C12 H20 O11 P2



RN 189167-90-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester, polymer with 10-[(3,4,5,6-tetrahydro-4,6-dithioxo-1,3,5-triazin-2-yl)oxy]decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

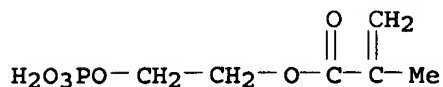
CM 1

CRN 114645-91-9  
 CMF C17 H27 N3 O3 S2



CM 2

CRN 24599-21-1  
 CMF C6 H11 O6 P



L33 ANSWER 28 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:203972 HCAPLUS

DN 126:187438

TI Storage-stable mercaptothiadiazole derivative-containing treating agents for metals

IN Kimura, Mikio; Iwamoto, Osamu

PA Tokuyama Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

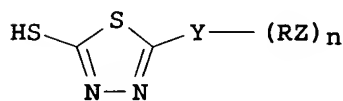
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 09025433    | A2   | 19970128 | JP 1995-266838  | 19951016 |
| PRAI | JP 1995-109748 | A    | 19950508 |                 |          |
| GI   |                |      |          |                 |          |



I

AB Title agents comprise solvents, 0.001-20% I (R = C1-20 hydrocarbylene; Z = radical polymerizable unsatd. group; when Y = N, n = 2; when Y = S or NH, n = 1), and 0.1-15% acidic group-containing (meth)acrylate monomers. A sandblasted Au surface was treated with a Me<sub>2</sub>CO solution containing 0.005% 2-(11-methacryloxyundecylthio)-5-mercapto-1,3,4-thiadiazole (II; prepared from 2,5-dimercapto-1,3,4-thiadiazole and 11-bromoundecyl methacrylate) and 7% 2-(10-methacryloxydecyl)malonic acid (III), dried, spread with a dental cement, pressed, and soaked in 37° water to form a



product showing tension adhesion 15 MPa, vs. 9 MPa without the II. A Me2CO solution containing 0.2% II and 10% III showed good storage stability at 37° for 2 mo.

IC ICM C09D004-00

ICS A61K006-00; C07D285-125

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55, 56, 63

ST dental adhesive primer mercaptothiadiazole methacrylate; storage stability mercaptothiadiazole methacrylate carboxylic methacrylate

IT Dental materials and appliances

(adhesives; mercaptothiadiazole (meth)acrylate- and acid group-containing (metha)acrylate-containing primers on metals for dental adhesive application)

IT Primers (paints)

(mercaptothiadiazole (meth)acrylate- and acid group-containing (meth)acrylate-containing primers on metals for dental adhesive application)

IT Acrylic polymers, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(mercaptothiadiazole (meth)acrylate- and acid group-containing (metha)acrylate-containing primers on metals for dental adhesive application)

IT 7440-50-8, Copper, miscellaneous 12772-01-9 111743-88-5

RL: MSC (Miscellaneous)

(mercaptothiadiazole (meth)acrylate- and acid group-containing (meth)acrylate-containing primers on metals for dental adhesive application)

IT 179408-88-9P 179408-89-0P 179408-91-4P 179408-93-6P 179408-95-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(mercaptothiadiazole (meth)acrylate- and acid group-containing (metha)acrylate-containing primers on metals for dental adhesive application)

IT 187541-24-8P 187541-25-9P 187541-26-0P 187541-27-1P

187541-28-2P 187541-29-3P 187541-30-6P 187541-31-7P 187541-32-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(storage-stable primers on metals for further dental adhesive application)

IT 7440-57-5, Gold, miscellaneous

RL: MSC (Miscellaneous)

(substrates; mercaptothiadiazole (meth)acrylate- and acid group-containing (meth)acrylate-containing primers on metals for dental adhesive application)

IT 187541-26-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(storage-stable primers on metals for further dental adhesive application)

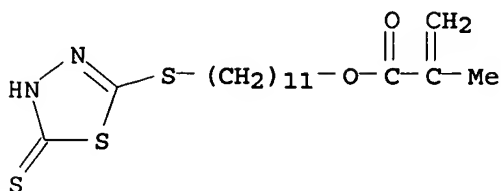
RN 187541-26-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 11-[(4,5-dihydro-5-thioxo-1,3,4-thiadiazol-2-yl)thio]undecyl ester, polymer with 10-(phosphonooxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 179408-88-9

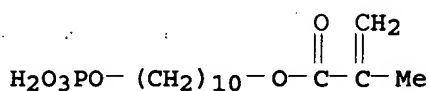
CMF C17 H28 N2 O2 S3



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



L33 ANSWER 29 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1996:124019 HCAPLUS

DN 124:185690

TI Acrylic compounds and dental adhesives

IN Ito, Kazuo; Myasaka, Sada; Yokoi, Kunyuki; Wakumoto, Sadao; Hisamitsu, Hisashi

PA San Medeikaru Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 07316098       | A2   | 19951205 | JP 1994-108711  | 19940523 |
| PRAI | JP 1994-108711    |      | 19940523 |                 |          |
| OS   | MARPAT 124:185690 |      |          |                 |          |

AB The acrylic compds. CH<sub>2</sub>:CRCO<sub>2</sub>CH<sub>2</sub>[CH(OH)]<sub>3</sub>CH<sub>2</sub>OH (I; R = H, Me) and dental adhesives containing I and monomers containing ≥1 olefinic bond are claimed. The dental adhesives show high adhesion to dentin and good sealing property for spaces between tooth tissues and restorative materials. The surface of an extracted human tooth was coated with a composition containing 35 parts I (R = Me), prepared from xylitol and methacrylic chloride, and 65 parts H<sub>2</sub>O, air-dried, and then coated with a com. dental adhesive ( Clearfil New Bond containing 10-methacryloyloxydecyl dihydrogen phosphate). Subsequently a composite resin was coated on the adhesive layer and cured. After soaking in H<sub>2</sub>O at 37° for 24 h, the samples showed average tensile strength 16.78 MPa.

IC ICM C07C069-54

ICS A61K006-00; C08F020-28

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

ST methacryloyloxyxylitol prepn dental adhesive; xylitol acryloyloxy prepn dental adhesive

IT Dental materials and appliances

(adhesives, dental adhesives containing (meth)acryloyloxyxylitol

and olefinic monomers)

IT Dental materials and appliances  
(cements, dental adhesives containing (meth)acryloyloxyxylitol and olefinic monomers)

IT 87-99-0, Xylitol 920-46-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(dental adhesives containing (meth)acryloyloxyxylitol and olefinic monomers)

IT 173985-16-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(dental adhesives containing (meth)acryloyloxyxylitol and olefinic monomers)

IT 174172-88-4P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental adhesives containing (meth)acryloyloxyxylitol and olefinic monomers)

IT 173985-17-6  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(dental adhesives containing (meth)acryloyloxyxylitol and olefinic monomers)

IT 174172-88-4P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental adhesives containing (meth)acryloyloxyxylitol and olefinic monomers)

RN 174172-88-4 HCAPLUS

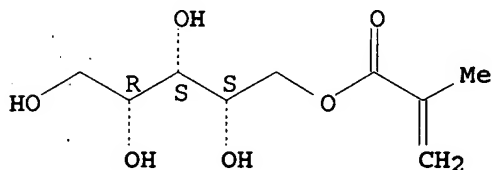
CN D-Xylitol, 1-(2-methyl-2-propenoate), polymer with 10-(phosphonoxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 173985-16-5

CMF C9 H16 O6

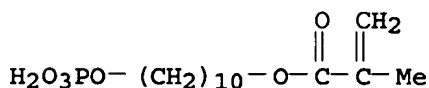
Absolute stereochemistry.



CM 2

CRN 85590-00-7

CMF C14 H27 O6 P



L33 ANSWER 30 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:372920 HCAPLUS

DN 122:142664

TI materials for manufacturing artificial bones and other implants

IN Ikada, Yoshito

PA Takiron Co., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 06335520    | A2   | 19941206 | JP 1993-151518  | 19930528 |
| PRAI | JP 1993-151518 |      | 19930528 |                 |          |

AB Implant materials for manufacturing e.g. artificial bones and artificial dental roots are polymers, wherein the surfaces are graft copolymerized with organophosphoric acid monomers such as Phosmer-M. When a structure made of the material is contacted with body fluids, a hydroxyapatite layer promptly formed. The artificial bone firmly binds to the real bone via the hydroxyapatite layer.

IC ICM A61L027-00

ICS A61C008-00; A61F002-28; A61F002-30

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 38

IT Bone

(artificial, materials for manufacturing artificial bones, artificial dental roots, and other implants)

IT Dental materials and appliances

Prosthetic materials and Prosthetics

(implants, materials for manufacturing artificial bones, artificial dental roots, and other implants)

IT 159239-17-5P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(materials for manufacturing artificial bones, artificial dental roots, and other implants)

IT 7664-38-2P, Phosphoric acid, biological studies

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(organo-, copolymers; materials for manufacturing artificial bones, artificial dental roots, and other implants)

IT 159239-17-5P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(materials for manufacturing artificial bones, artificial dental roots, and other implants)

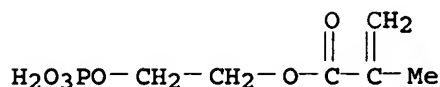
RN 159239-17-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester, polymer with ethene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

CMF C6 H11 O6 P



CM 2

CRN 74-85-1

CMF C2 H4

H<sub>2</sub>C=CH<sub>2</sub>

L33 ANSWER 31 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:255803 HCAPLUS

DN 122:38922

TI Photopolymerizing dental compositions containing polymerizing monomers, camphorquinone, and aminobenzophenones

IN Nishida, Koji; Yamauchi, Junichi

PA Kuraray Co, Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 06256131   | A2   | 19940913 | JP 1993-47991   | 19930309 |
|      | JP 3419488    | B2   | 20030623 |                 |          |
| PRAI | JP 1993-47991 |      | 19930309 |                 |          |

AB Photopolymerizing dental compns. contain radical-polymerizing monomers, camphorquinone (I), and R<sub>1</sub>R<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COPh (R<sub>1</sub>, R<sub>2</sub> = C<sub>1</sub>-3 alkyl). The dental compns. show good adhesion strength and hardening properties. A composition containing Bis-GMA 60, triethylene glycol dimethacrylate 40, I 0.5, and 4-dimethylaminobenzophenone (II) 1.0 weight part showed hardening time of 14 s, vs. 190 s, for a composition formulated without II.

IC ICM A61K006-083

ICS A61K006-083

CC 63-7 (Pharmaceuticals)

ST dental polymer camphorquinone aminobenzophenone

IT Polymerization catalysts

(photopolymerizing dental compns.)

IT Dental materials and appliances

(polymers, dental materials containing polymerizing monomers, camphorquinone, and aminobenzophenones)

IT 7732-18-5, Water, biological studies

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(photopolymerizing dental compns.)

IT 26426-05-1P, Bis-GMA-triethylene glycol dimethacrylate copolymer

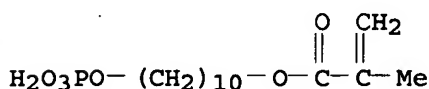
75553-97-8P 138532-12-4P 146757-82-6P 146894-54-4P 150503-80-3P

159897-11-7P 159897-12-8P 159897-13-9P 159897-14-0P 159897-15-1P

159897-16-2P 159897-17-3P

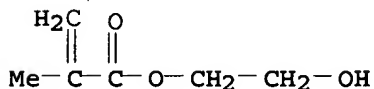
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(photopolymer. dental compns.)  
 IT 530-44-9, 4-Dimethylaminobenzophenone 10373-78-1, Camphorquinone  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization initiator; photopolymer. dental compns.)  
 IT 159897-16-2P  
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (photopolymer. dental compns.)  
 RN 159897-16-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 10-(phosphonoxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 85590-00-7  
 CMF C14 H27 O6 P



CM 2

CRN 868-77-9  
 CMF C6 H10 O3



L33 ANSWER 32 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1994:200478 HCAPLUS  
 DN 120:200478  
 TI Two-component dental adhesive compositions containing phosphate salts as primers  
 IN Yamamoto, Naoki; Ishita, Hitoshi; Yamazaki, Hiroko  
 PA Mitsubishi Rayon Co, Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

| PATENT NO.         | KIND | DATE     | APPLICATION NO. | DATE     |
|--------------------|------|----------|-----------------|----------|
| PI JP 05306208     | A2   | 19931119 | JP 1993-17545   | 19930204 |
| PRAI JP 1992-49967 | A1   | 19920306 |                 |          |

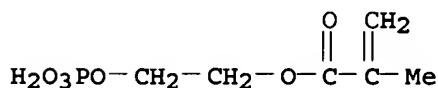
AB The title compns. comprise (A) radically polymerizable monomers, R1OP(O)(OH)OR2 (R1, R2 = CH2:CR3CO2R4, CH2:CR3CO2R4OR4; R2 may be H, C1-12 alkyl; R3 = H, Me; R4 = C1-2 alkylene), and (partially oxidized) trialkylborans and (B) solns. containing phosphate salts. Dentin is treated with the phosphate solns. in prior to adhesion with metals, resins, ceramics, etc. A dentin was treated with aqueous Fe4(P2O7)3 solution, coated with composition containing Me methacrylate 50, 2,2'-bis[4-

(methacryloxyethoxy)phenyl]propane 50, methacryloyloxyethyl phosphate 10, and Bu3B 5 weight parts, applied with com. available prosthetic material, cured, and soaked in water for 1 day to show 173 kg/cm<sup>2</sup>.

IC ICM A61K006-00  
 CC 63-7 (Pharmaceuticals)  
 ST dental adhesive methacrylate phosphate primer; alkylboran acrylate dental adhesive  
 IT Phosphates, biological studies  
 RL: BIOL (Biological study)  
 (dental adhesive compns. containing (meth)acryloyloxyalkyl phosphates and trialkylborans and, as primers)  
 IT Polymerization catalysts  
 (trialkylborans, for dental adhesives containing (meth)acryloyloxyalkyl phosphates)  
 IT Dental materials and appliances  
 (adhesives, containing (meth)acryloyloxyalkyl phosphates and trialkylborans, phosphate salts as primers for)  
 IT 122-56-5 122-56-5D, partially oxidized 1116-39-8 1116-61-6  
 RL: BIOL (Biological study)  
 (dental adhesive compns. containing (meth)acryloyloxyalkyl phosphates and phosphate salts and)  
 IT 7757-87-1, Magnesium phosphate [Mg<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>] 7798-23-4, Copper phosphate [Cu<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>] 10058-44-3, Iron phosphate [Fe<sub>4</sub>(P<sub>2</sub>O<sub>7</sub>)<sub>3</sub>] 13455-36-2, Cobalt phosphate [Co<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>] 14940-41-1, Iron phosphate [Fe<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>] 15191-80-7, Copper phosphate (Cu<sub>2</sub>P<sub>2</sub>O<sub>7</sub>) 15600-46-1, Iron phosphate (Fe<sub>2</sub>P<sub>2</sub>O<sub>7</sub>)  
 RL: BIOL (Biological study)  
 (dental adhesive compns. containing (meth)acryloyloxyalkyl phosphates and trialkylborans and, as primer)  
 IT 61778-65-2P 75302-76-0P 146189-02-8P 153821-09-1P  
 153821-10-4P 153821-11-5P 153839-23-7P  
 RL: PREP (Preparation)  
 (preparation of, dental adhesives containing, phosphate salts as primers for)  
 IT 75302-76-0P  
 RL: PREP (Preparation)  
 (preparation of, dental adhesives containing, phosphate salts as primers for)  
 RN 75302-76-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-(phosphonoxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

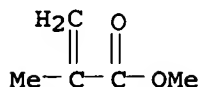
CM 1

CRN 24599-21-1  
 CMF C6 H11 O6 P



CM 2

CRN 80-62-6  
 CMF C5 H8 O2



L33 ANSWER 33 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:192514 HCAPLUS

DN 118:192514

TI Preparation of (meth)acrylate ester-based polymer spherical fine particles with monodisperse particle size distribution

IN Yamamoto, Naoki; Mukai, Nobuhiro; Makino, Takayuki; Yamazaki, Hiroko

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 04351613    | A2   | 19921207 | JP 1991-124164  | 19910529 |
| PRAI | JP 1991-124164 |      | 19910529 |                 |          |

AB The title particles useful as dental, medical, and cosmetic materials, are prepared by copolyng. (meth)acrylate esters and polymerizable organic phosphate esters (R2O)1P(O)(OR1)m(OH)n or (R3O)2P(O)O-NHR43+ [R1 = (meth)acryloyloxyalkyl, (meth)acryloyloxyalkyloxyalkyl (alkyl means C1-12 alkyl); R2 = C1-12 alkyl; R3 = H, (meth)acryloyloxyalkyl, (meth)acryloyloxyalkyloxyalkyl (alkyl means C1-5 alkyl; both R3 are never H simultaneously); R4 = H, (hydroxy-substituted) C1-5 alkyl, (meth)acryloyloxyalkyl, (meth)acryloyloxyalkyloxyalkyl (alkyl means C1-5 alkyl; all R4 are never H or unsatd. groups simultaneously); l = 1, 0; m = 1, 2; n = 1, 2; l + m + n = 3] in the presence of radical polymerization initiators in H2O and/or alc. solvents. Polymerization of 9.8 parts Me methacrylate and 0.2 part mono-2-(meth)acryloyloxyethyl phosphate in the presence of AIBN in EtOH-H2O mixed solvent at 70° for 3 h under N gave 7.1 g polymer spherical fine particles showing average particle size 0.5 μm and size polydispersity index 1.01.

IC ICM C08F220-12

ICS C08F002-12; C08F230-02

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 62, 63

IT Cosmetics

Dental materials and appliances

Medical goods

((meth)acrylate ester-based polymer spherical fine particles for)

IT 38742-68-6P 72923-41-2P 72923-42-3P

75302-76-0P 87622-18-2P 106971-83-9P 120881-19-8P

131808-63-4P 147285-22-1P 147285-23-2P 147285-24-3P

147285-25-4P 147285-26-5P

RL: PREP (Preparation)

(spherical fine particles, preparation of, with monodisperse particle size distribution)

IT 38742-68-6P 72923-41-2P 75302-76-0P

120881-19-8P 131808-63-4P 147285-25-4P

147285-26-5P

RL: PREP (Preparation)

(spherical fine particles, preparation of, with monodisperse particle size distribution)

RN 38742-68-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with

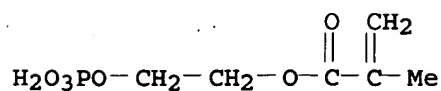


2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

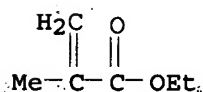
CMF C6 H11 O6 P



CM 2

CRN 97-63-2

CMF C6 H10 O2



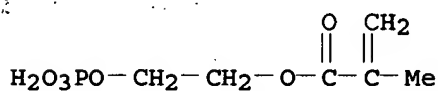
RN 72923-41-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with  
2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

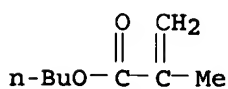
CMF C6 H11 O6 P



CM 2

CRN 97-88-1

CMF C8 H14 O2



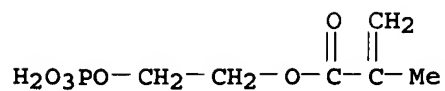
RN 75302-76-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

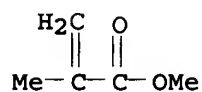
CRN 24599-21-1

CMF C6 H11 O6 P



CM 2

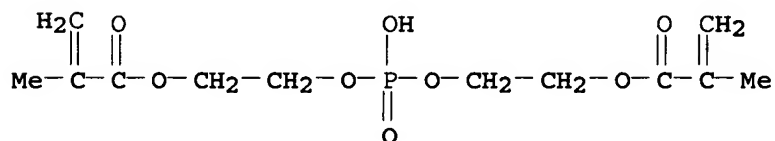
CRN 80-62-6  
CMF C5 H8 O2



RN 120881-19-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phosphinicobis(oxy-2,1-ethanediyl) ester,  
polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

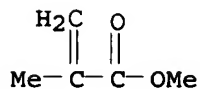
CM 1

CRN 32435-46-4  
CMF C12 H19 O8 P



CM 2

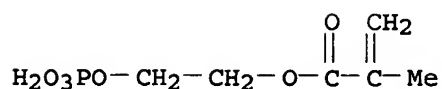
CRN 80-62-6  
CMF C5 H8 O2



RN 131808-63-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with  
2-(phosphonoxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

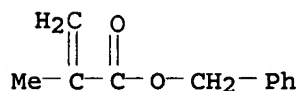
CM 1

CRN 24599-21-1  
CMF C6 H11 O6 P



CM 2

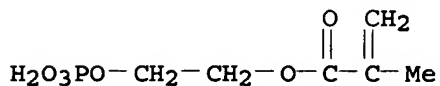
CRN 2495-37-6  
CMF C11 H12 O2



RN 147285-25-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester, polymer with methyl 2-propenoate (9CI) (CA INDEX NAME)

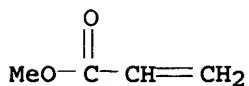
CM 1

CRN 24599-21-1  
CMF C6 H11 O6 P



CM 2

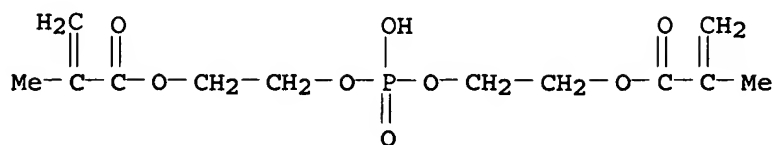
CRN 96-33-3  
CMF C4 H6 O2



RN 147285-26-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, phosphinobis(oxy-2,1-ethanediyl) ester, polymer with ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

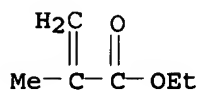
CRN 32435-46-4  
CMF C12 H19 O8 P



CM 2

CRN 97-63-2

CMF C6 H10 O2



L33 ANSWER 34 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:132234 HCAPLUS

DN 118:132234

TI Dental adhesives containing radical-polymerizing copolymers; and monomers and polymerization initiators

IN Yamamoto, Naoki; Mukai, Nobuhiro; Makino, Takayuki; Yamazaki, Hiroko

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 04273804   | A2   | 19920930 | JP 1991-55679   | 19910228 |
| PRAI | JP 1991-55679 |      | 19910228 |                 |          |

AB Dental adhesives contain (a) copolymer powders of radical-polymerizing unsatd. monomers, which do not contain carboxyl group or carboxylic anhydride residue in the mols., with polymerizing unsatd. group-containing P compds., (b) radical-polymerizing unsatd. monomers, and (c) radical polymerization initiators as the main ingredients. Me methacrylate-methacryloyloxyethyl phosphate copolymer (I) (preparation given) 5, N,N-diethanol-p-toluidine 0.05, p-toluenesulfinic acid 0.02, Me methacrylate 60, triethylene glycol dimethacrylate 40 weight parts, and 1.0 weight% (based on the monomers) benzoyl peroxide were mixed to give an adhesive, which was applied to an acrylic resin and kept in H<sub>2</sub>O for 1 mo to show bonding strength of 144 kg/cm<sup>2</sup>, vs. 43 kg/cm<sup>2</sup>, for the control containing poly(methacrylic acid) instead of I.

IC ICM A61K006-00

ICS C08F230-02; C09J004-02

CC 63-7 (Pharmaceuticals)

ST dental adhesive phosphate methacrylate copolymer

IT Dental materials and appliances

(adhesives, containing methacrylate-based copolymers, polymerization initiators in)

IT 3077-12-1, N,N-Diethanol-p-toluidine

RL: BIOL (Biological study)

(polymerization initiator, for dental adhesives containing methacrylate-based polymers)

IT 75302-76-0P 146188-93-4P 146188-94-5P 146188-95-6P  
 146188-96-7P 146188-97-8P 146188-98-9P 146188-99-0P 146189-00-6P  
 146189-01-7P 146189-02-8P 146219-87-6P 146219-88-7P 146219-89-8P  
 146332-36-7P

RL: THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(preparation of, as dental adhesive, polymerization initiators in)

IT 75302-76-0P

RL: THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(preparation of, as dental adhesive, polymerization initiators in)

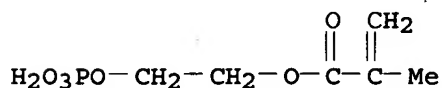
RN 75302-76-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

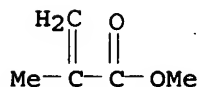
CMF C6 H11 O6 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 35 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1991:415521 HCAPLUS

DN 115:15521

TI Effect of 2-(methacryloxy)ethyl phenyl hydrogen phosphate on adhesion to  
 dentin

AU Wang, T.; Nakabayashi, N.

CS Inst. Med. Dent. Eng., Tokyo Med. and Dent. Univ., Tokyo, 101, Japan

SO Journal of Dental Research (1991), 70(1), 59-66

CODEN: JDREAF; ISSN: 0022-0345

DT Journal

LA English

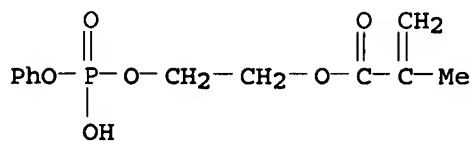
AB A variety of methacrylate-based materials has been developed with the capacity of adhering to dentin. This study investigated the effectiveness of 2-(methacryloxy)ethyl Ph hydrogen-phosphate (phenyl-P) for bonding 5% phenyl-P in Me methacrylate (MMA) to dentinal surfaces. Polymerization of the phenyl-P/MMA monomer was initiated by partially oxidized tri-Bu borane catalyst (TBB). The mean tensile bond strength of 5% phenyl-P in MMA to dentin that was pre-treated with an aqueous solution of 10% citric acid/3% ferric chloride, abbreviated as 10-3, was found to be 10.5 MPa. Scanning electron microscope examination demonstrated the formation of a transitional of "hybrid" layer of resin-reinforced

**dentin**, created by the intermingling and entanglement of polymerized resin with collagen bundles exposed by **dentin** pre-treatment with 10-3, an effective remover of the **dentinal** smear layer. This "hybrid" layer or zone was essential for high tensile bond strength to be attained. Phenyl-P was found to be effective in promoting monomer diffusion and impregnating monomer into demineralized **dentinal** surfaces. The formation of the "hybrid" layer of resin-reinforced **dentin** followed in situ resin polymerization initiated by partially oxidized tri-Bu borane (TBB). Ferric (Fe<sup>3+</sup>) ions deposited on **dentinal** surfaces from the 10-3 solution also acted to improve monomer diffusion and entanglement with demineralized **dentin**, and facilitated the formation of the "hybrid" layer/zone.

CC 63-7 (Pharmaceuticals)  
ST **dentin** adhesion methacryloxyethyl phenyl phosphate  
IT Adhesion  
    (of (methacryloxy)ethyl Ph hydrogen phosphate-Me methacrylate polymer, to **dentin**)  
IT **Dental** materials and appliances  
    (adhesives, (methacryloxy)ethyl Ph hydrogen phosphate-Me methacrylate polymer, adhesion of, to **dentin**)  
IT 122-56-5, Tributylborane  
    RL: BIOL (Biological study)  
        ((methacryloxy)ethyl Ph hydrogen phosphate-Me methacrylate polymer adhesion to **dentin** in relation to)  
IT 64716-34-3  
    RL: BIOL (Biological study)  
        (adhesion of methacrylate polymer to **dentin** in relation to)  
IT 7705-08-0, Ferric chloride, uses and miscellaneous  
    RL: USES (Uses)  
        (**dentin** pretreatment with citric acid and, (methacryloxy)ethyl Ph hydrogen phosphate-Me methacrylate polymer adhesion in relation to)  
IT 77-92-9, Citric acid, uses and miscellaneous  
    RL: USES (Uses)  
        (**dentin** pretreatment with ferric chloride and, (methacryloxy)ethyl Ph hydrogen phosphate-Me methacrylate polymer adhesion in relation to)  
IT 64716-35-4P  
    RL: PRP (Properties); SPN (Synthetic preparation); **PREP** (Preparation)  
        (preparation and adhesion of, to **dentin**)  
IT 64716-35-4P  
    RL: PRP (Properties); SPN (Synthetic preparation); **PREP** (Preparation)  
        (preparation and adhesion of, to **dentin**)  
RN 64716-35-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-[(hydroxyphenoxyphosphinyl)oxy]ethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

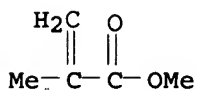
CM 1

CRN 64716-34-3  
CMF C12 H15 O6 P



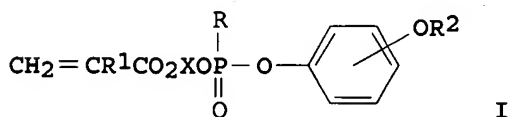
CM 2

CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 36 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1989:82531 HCAPLUS  
DN 110:82531  
TI Dental cements containing phosphates and phosphoryl chlorides  
IN Nakabayashi, Norio; Kanda, Kazusato  
PA Ube Industries, Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

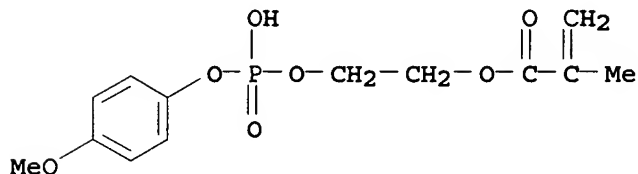
|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
|      | -----         | ---  | -----    | -----           | -----    |
| PI   | JP 62281885   | A2   | 19871207 | JP 1987-6889    | 19870114 |
|      | JP 06053751   | B4   | 19940720 |                 |          |
| PRAI | JP 1986-26891 | A1   | 19860212 |                 |          |
| GI   |               |      |          |                 |          |



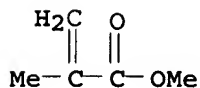
AB CH<sub>2</sub>:CR<sub>1</sub>CO<sub>2</sub>-X-OP(O)(R)OC<sub>6</sub>H<sub>4</sub>OR<sub>2</sub> [I; X = ethylene, trimethylene; R = Cl, OH; R<sub>1</sub> = H, Me; R<sub>2</sub> = alkyl], useful as dental cement, are prepared A dental cement prepared from a 5% solution of I [X = CH<sub>2</sub>CH<sub>2</sub>, R = Cl, R<sub>1</sub> = Me, OR<sub>2</sub> = OMe-4] in Me methacrylate and a 2% solution of Na p-toluenesulfonate in EtOH showed a binding strength of 145 kg/cm<sup>2</sup> vs. 88 kg/cm<sup>2</sup> for a dental cement prepared from CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>OP(O)(OH)OPh.

IC ICM C07F009-14  
ICS A61K006-00; C09J003-14  
ICA C08F030-02  
CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 29  
ST dental cement methacryloyloxyethylmethoxyphenylphosphoryl  
chloride; acrylic polymer dental cement  
IT Dental materials and appliances  
(cements, acrylic polymers for)  
IT 25685-29-4  
RL: BIOL (Biological study)  
(dental filling containing, cement for)  
IT 118857-66-2P 118857-67-3P  
RL: PREP (Preparation)  
(preparation of, as dental cement)  
IT 118857-67-3P  
RL: PREP (Preparation)  
(preparation of, as dental cement)  
RN 118857-67-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-[[hydroxy(4-methoxyphenoxy)phosphinyl]oxy]e  
thyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)  
CM 1  
CRN 112119-87-6  
CMF C13 H17 O7 P



CM 2  
CRN 80-62-6  
CMF C5 H8 O2



L33 ANSWER 37 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1986:614120 HCAPLUS  
DN 105:214120  
TI Film-forming adhesives for teeth and bones  
IN Kawaguchi, Toshio; Murata, Yasuo; Kusumoto, Koji  
PA Tokuyama Soda Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 53 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 61151104 | A2   | 19860709 | JP 1984-271917  | 19841225 |



JP 04063842 B4 19921013  
 PRAI JP 1984-271917 19841225  
 AB Film-forming adhesives for teeth and bones consist of polymers containing (HZ1) (Z2:)P= group (Z1, Z2 = O, S) and alkoxides of Ti, Zr, Al, Sn, Ca, or Fe with or without chelators. The adhesives are antimicrobial. Thus, vinylphosphonate was polymerized in the presence of 2,2'-azobis(2-aminodipropene)-HCl to form vinylphosphonate polymer. An adhesive consisted of solution A containing 5 parts vinylphosphonate polymer and 95 parts EtOH, and solution B containing 2 parts tetra-Bu zirconate and 98 parts EtOH.

IC ICM A61K006-00  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 37  
 ST adhesive dental bone polymer metal alkoxide  
 IT Chelating agents  
 (dental and bone adhesives containing metal alkoxides and phosphorus-containing polymers and)  
 IT Polymers, biological studies  
 RL: BIOL (Biological study)  
 (phosphorus-containing, for dental and bone adhesives)  
 IT Dental materials and fillings  
 Surgical dressings and goods  
 (adhesives, metal alkoxides and phosphorus-containing polymers for)  
 IT Alcohols, biological studies  
 RL: BIOL (Biological study)  
 (alkoxides, dental and bone adhesives containing phosphorus-containing polymers and)  
 IT 50-21-5, biological studies 50-78-2 69-72-7, biological studies  
 90-05-1 94-71-3 97-54-1 98-79-3 102-71-6, biological studies  
 105-53-3 118-61-6 120-80-9, biological studies 123-54-6, biological studies  
 141-97-9 147-85-3, biological studies 475-11-6 480-64-8  
 504-63-2 567-36-2 579-60-2 618-27-9 628-35-3 635-53-0 818-61-1  
 868-77-9 925-16-6 999-61-1 2243-42-7 2370-39-0 2432-11-3  
 2843-16-5 4324-38-3 4374-62-3 5876-91-5 6338-04-1 6734-41-4  
 17773-30-7 19878-71-8 21905-73-7 24469-20-3 25876-88-4  
 28497-59-8 50853-28-6 51386-18-6 58888-76-9 59086-52-1  
 74266-29-8 77102-92-2 86153-98-2 87877-75-6 89794-85-4  
 96881-93-5 99451-14-6 99451-15-7 99542-03-7 100155-30-4  
 105188-96-3  
 RL: BIOL (Biological study)  
 (dental and bone adhesives containing metal alkoxides and phosphorus-containing polymers and)  
 IT 134-11-2 300-85-6  
 RL: BIOL (Biological study)  
 (dental and bone adhesives containing metal alkoxides and polymers and)  
 IT 546-68-9 555-31-7 556-91-2 1071-76-7 1184-61-8 2171-98-4  
 3085-30-1 5128-29-0 5593-70-4 7360-47-6 14254-05-8 14995-22-3  
 15571-47-8 15571-51-4 51287-43-5 98906-82-2  
 RL: BIOL (Biological study)  
 (dental and bone adhesives containing phosphorus-containing polymers and)  
 IT 27754-99-0P 31292-41-8P 51131-63-6P 72923-41-2P  
 76701-84-3P 86292-91-3P 102931-73-7P 105303-84-2P  
 105303-85-3P 105303-87-5P 105303-88-6P 105303-89-7P 105303-90-0P  
 105303-92-2P 105303-93-3P 105303-94-4P 105303-95-5P 105303-96-6P  
 105303-97-7P 105303-98-8P 105303-99-9P 105304-00-5P 105304-01-6P  
 105304-02-7P 105304-04-9P 105304-05-0P 105304-06-1P  
 105304-07-2P 105304-08-3P 105304-09-4P 105304-11-8P  
 105304-12-9P 105304-14-1P 105304-15-2P 105304-17-4P 105304-18-5P  
 105304-20-9P 105304-22-1P 105304-24-3P 105323-15-7P 105323-17-9P

105323-19-1P 105323-21-5P

RL: PREP (Preparation)

(preparation of, for dental and bone adhesives)

IT 72923-41-2P 102931-73-7P 105304-06-1P

105304-07-2P

RL: PREP (Preparation)

(preparation of, for dental and bone adhesives)

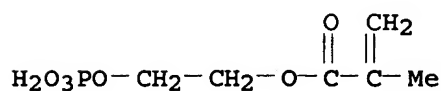
RN 72923-41-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with  
2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

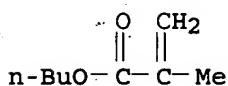
CMF C6 H11 O6 P



CM 2

CRN 97-88-1

CMF C8 H14 O2



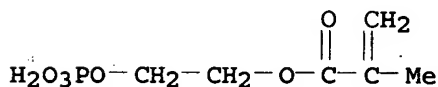
RN 102931-73-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(phosphonooxy)ethyl ester, polymer with  
ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 24599-21-1

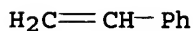
CMF C6 H11 O6 P



CM 2

CRN 100-42-5

CMF C8 H8



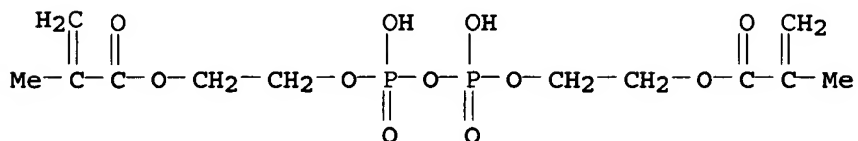
RN 105304-06-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 4,6-dihydroxy-4,6-dioxido-3,5,7-trioxa-4,6-diphosphanonane-1,9-diyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 61988-50-9

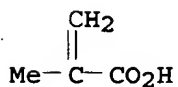
CMF C12 H20 O11 P2



CM 2

CRN 79-41-4

CMF C4 H6 O2



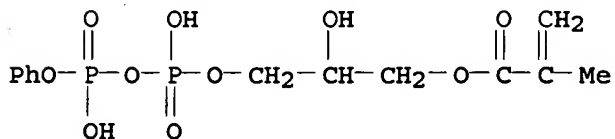
RN 105304-07-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2,5,7-trihydroxy-5,7-dioxido-7-phenoxy-4,6-dioxa-5,7-diphosphahept-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 83824-50-4

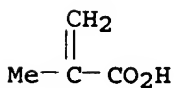
CMF C13 H18 O10 P2



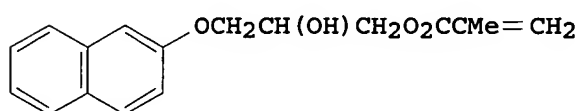
CM 2

CRN 79-41-4

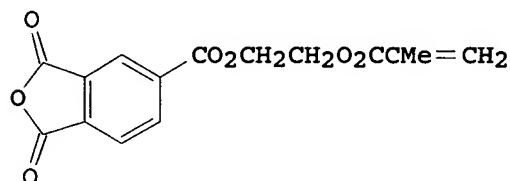
CMF C4 H6 O2



L33 ANSWER 38 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 1983:528268 HCAPLUS  
DN 99:128268  
TI Studies on dental self-curing resins. XXI. Function of new  
monomers promoting adhesion to tooth substrate  
AU Nakabayashi, Nobuo; Yamashita, Shuzo; Kojima, Katsunori; Masuhara, Eiichi  
CS Inst. Med. Dent. Eng., Tokyo Med. Dent. Univ., Tokyo, Japan  
SO Iyo Kizai Kenkyusho Hokoku (Tokyo Ika Shika Daigaku) (1981), 15, 37-43  
CODEN: IKKHBS; ISSN: 0082-4739  
DT Journal  
LA Japanese  
GI



# I



II

AB Dental adhesives were prepared by mixing poly(Me methacrylate) (I) [9011-14-7] powder with a mixture of Me methacrylate and monomers containing both hydrophobic and hydrophilic groups: 2-hydroxyethyl methacrylate, I,  $\text{CH}_2:\text{CMeCO}_2\text{CH}_2\text{CH}_2\text{OP}(\text{O})(\text{OH})\text{OPh}$ ,  $\text{CH}_2:\text{CMeCO}_2\text{CH}_2\text{CH}_2\text{OP}(\text{O})(\text{OH})_2$ , and II. The corresponding nonpolymerizable monomers with saturated bonds decreased the tensile adhesive strength of Me methacrylate adhesives. Curing temperature did not affect adhesive strength. The affinity of monomers to tooth substrate was more important in adhesive strength to tooth than the tensile strength of the cured cements. The hydrophobic and hydrophilic groups in the monomers were important for both adhesive strength and copolymerizability with Me methacrylate.

CC 63-7 (Pharmaceuticals)

ST dental cement methacrylate; adhesion tooth methacrylate monomer

IT Dental materials and fillings  
(cements, Me methacrylate, adhesion of, to tooth, monomers effect on)

IT 6942-58-1 87084-48-8 87084-49-9 87084-50-2 87084-51-3  
RL: BIOL (Biological study)  
(dental Me methacrylate cements adhesion to tooth in relation to)

IT 26355-01-1 64716-35-4 71716-65-9 75302-76-0 76774-16-8  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(dental cements containing, adhesion of, to surfaces)

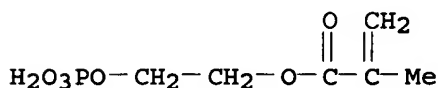
IT 9011-14-7  
RL: BIOL (Biological study)  
(dental cements, adhesion of, to tooth, methacrylate monomer effect on)

IT 75302-76-0  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(dental cements containing, adhesion of, to surfaces)

RN 75302-76-0 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

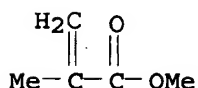
CM 1

CRN 24599-21-1  
 CMF C6 H11 O6 P



CM 2

CRN 80-62-6  
 CMF C5 H8 O2



L33 ANSWER 39 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1983:443580 HCAPLUS  
 DN 99:43580  
 TI Phosphate acrylate ester monomers in surgical adhesive compositions  
 IN Omura, Ikuo; Yamauchi, Junichi; Nagase, Yoshinori; Uemura, Fumiko  
 PA Kuraray Co., Ltd. , Japan  
 SO Eur. Pat. Appl., 125 pp.  
 CODEN: EPXXDW

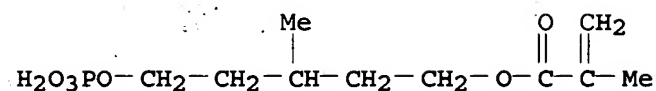
DT Patent  
 LA English  
 FAN.CNT 6

|      | PATENT NO.            | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-----------------------|------|----------|-----------------|----------|
| PI   | EP 74708              | A2   | 19830323 | EP 1982-303942  | 19820726 |
|      | EP 74708              | A3   | 19840111 |                 |          |
|      | EP 74708              | B1   | 19860219 |                 |          |
|      | R: DE, FR, GB, IT, NL |      |          |                 |          |
|      | JP 58021688           | A2   | 19830208 | JP 1981-119536  | 19810729 |
|      | JP 63013436           | B4   | 19880325 |                 |          |
|      | JP 58021687           | A2   | 19830208 | JP 1981-119537  | 19810729 |
|      | JP 63013435           | B4   | 19880325 |                 |          |
|      | JP 58021607           | A2   | 19830208 | JP 1981-120371  | 19810730 |
|      | JP 03071402           | B4   | 19911113 |                 |          |
|      | JP 58128393           | A2   | 19830730 | JP 1982-13038   | 19820128 |
|      | JP 01025757           | B4   | 19890519 |                 |          |
|      | JP 58192891           | A2   | 19831110 | JP 1982-74830   | 19820504 |
|      | JP 01027077           | B4   | 19890526 |                 |          |
| PRAI | JP 1981-119536        | A    | 19810729 |                 |          |
|      | JP 1981-119537        | A    | 19810729 |                 |          |
|      | JP 1981-120371        | A    | 19810730 |                 |          |
|      | JP 1982-13038         | A    | 19820128 |                 |          |
|      | JP 1982-74830         | A    | 19820504 |                 |          |

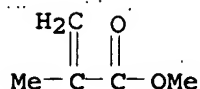
OS CASREACT 99:43580  
AB Adhesives for bone and teeth and adhesives, metals, polymers and ceramics to bone or teeth comprise polymers of phosphate acrylate ester monomers with other acrylates. These polymers show good wet adhesive strength. Thus, methacrylic acid [79-41-4] was esterified with 1,3-hexanediol [21531-91-9] to give a mixture of 75% monoester [13092-57-4] and diester. The monoester was phosphorylated with POCl<sub>3</sub> to give 6-methacryloyloxyhexyl dihydrogen phosphate (I) [85589-96-4]. An adhesive composition was prepared from a 2-part composition; the 1st part contained I 5, Me methacrylate 95, and Bz2O2 1 part and the 2nd part contained poly(Me methacrylate) 100, Na benzenesulfinate 3, and N,N'-diethanol-p-toluidine 1 part. After mixing, the composition showed adhesive strengths of 451 and 425 kg/cm<sup>2</sup> after 24 h and 10 days, resp., in a test for water resistance of their adhesive strengths on metal. A number of ester phosphate ester acrylates were prepared and acrylic polymers from these tested for wet adhesive strength.

IC C09J003-14; C08F230-02; C08F220-20; A61K006-08  
ICA A61L015-07; A61L015-06  
CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 23, 25, 38  
ST surgical adhesive acrylate phosphate; bone cement acrylate phosphate; dental cement acrylate phosphate  
IT Dental materials and fillings  
(cements, acrylate phosphate esters in)  
IT 86277-54-5P 86284-91-5P 86284-92-6P  
86284-93-7P 86284-94-8P 86284-95-9P  
86284-96-0P 86284-97-1P 86284-98-2P 86284-99-3P  
86285-00-9P 86285-01-0P 86285-02-1P 86285-03-2P  
86285-05-4P 86285-07-6P 86285-09-8P 86285-11-2P  
86285-13-4P 86285-15-6P 86285-17-8P 86285-18-9P  
86285-19-0P 86285-20-3P 86285-21-4P 86285-23-6P  
86285-25-8P 86285-27-0P 86285-29-2P 86285-31-6P  
86285-32-7P 86285-33-8P 86285-34-9P 86285-35-0P  
86285-36-1P 86285-37-2P 86285-38-3P 86285-40-7P  
86285-41-8P 86285-42-9P 86285-43-0P 86285-44-1P 86285-45-2P  
86285-46-3P 86285-48-5P 86285-49-6P 86285-50-9P 86285-51-0P  
86285-52-1P 86285-53-2P 86285-54-3P 86285-55-4P 86285-56-5P  
86285-57-6P 86285-58-7P 86285-59-8P 86285-60-1P 86285-61-2P  
86285-62-3P 86285-63-4P 86285-64-5P 86285-65-6P 86285-66-7P  
86285-67-8P 86285-68-9P 86285-69-0P 86285-70-3P  
86285-71-4P 86285-72-5P 86285-73-6P 86285-74-7P  
86285-75-8P 86292-91-3P 86292-92-4P 86293-18-7P 86293-19-8P  
86307-51-9P 86307-52-0P 86307-53-1P 86307-54-2P  
86307-55-3P 86320-28-7P 86332-30-1P  
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation and wet adhesive strength of, for surgical adhesives)  
IT 86284-91-5P 86284-92-6P 86284-93-7P  
86284-94-8P 86284-95-9P 86284-98-2P  
86284-99-3P 86285-00-9P 86285-09-8P  
86285-11-2P 86285-15-6P 86285-23-6P  
86285-25-8P 86285-27-0P 86285-33-8P  
86285-38-3P 86285-70-3P 86285-72-5P  
86285-73-6P 86307-51-9P 86307-55-3P  
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation and wet adhesive strength of, for surgical adhesives)  
RN 86284-91-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 3-methyl-5-(phosphonooxy)pentyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85724-29-4  
CMF C10 H19 O6 P

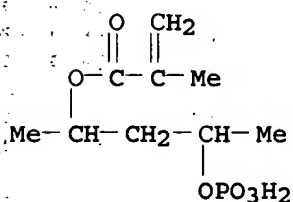
CM 2

CRN 80-62-6  
CMF C5 H8 O2

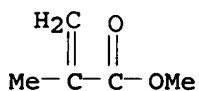
RN 86284-92-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
1-methyl-3-(phosphonooxy)butyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 85724-30-7  
CMF C9 H17 O6 P

CM 2

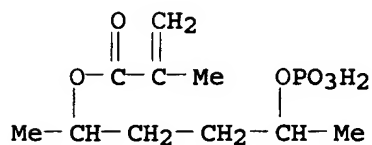
CRN 80-62-6  
CMF C5 H8 O2

RN 86284-93-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
1-methyl-4-(phosphonooxy)pentyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

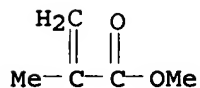
CM 1

CRN 85724-31-8  
 CMF C10 H19 O6 P



CM 2

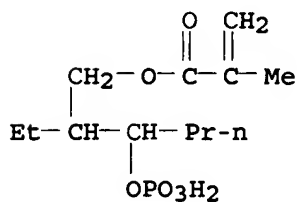
CRN 80-62-6  
 CMF C5 H8 O2



RN 86284-94-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethyl-3-(phosphonooxy)hexyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

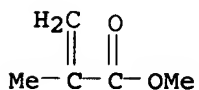
CM 1

CRN 85724-32-9  
 CMF C12 H23 O6 P



CM 2

CRN 80-62-6  
 CMF C5 H8 O2



RN 86284-95-9 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-phenyl-2-(phosphonooxy)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

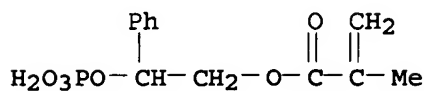


NAME)

CM 1

CRN 85724-33-0

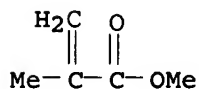
CMF C12 H15 O6 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



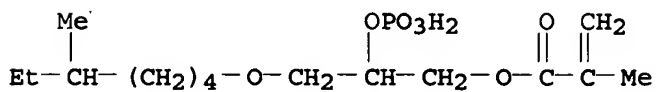
RN 86284-98-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 3-[(5-methylheptyl)oxy]-2-(phosphonoxy)propyl 2-methyl-2-propenoate (9CI)  
 (CA INDEX NAME)

CM 1

CRN 85747-98-4

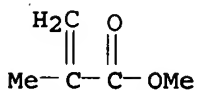
CMF C15 H29 O7 P



CM 2

CRN 80-62-6

CMF C5 H8 O2

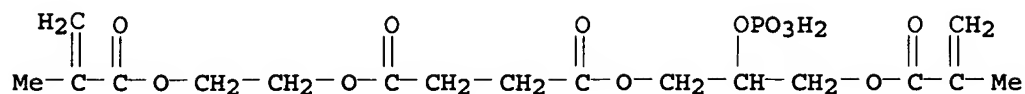


RN 86284-99-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 3-[(2-methyl-1-oxo-2-propenyl)oxy]-  
 2-(phosphonoxy)propyl butanedioate (9CI) (CA INDEX NAME)

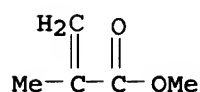
CM 1

CRN 85724-37-4  
CMF C17 H25 O12 P



CM 2

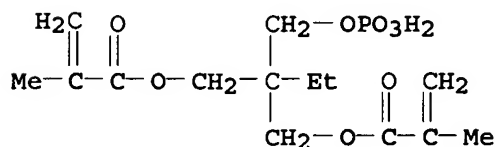
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-00-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[(phosphonooxy)methyl]-1,3-propanediyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

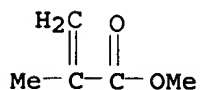
CM 1

CRN 85724-38-5  
CMF C14 H23 O8 P



CM 2

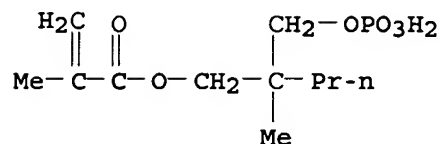
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-09-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-methyl-2-[(phosphonooxy)methyl]pentyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

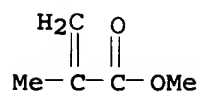
CM 1

CRN 86285-08-7  
CMF C11 H21 O6 P



CM 2

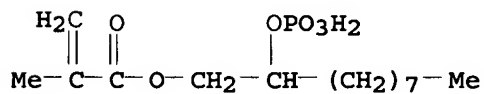
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-11-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
2-(phosphonooxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

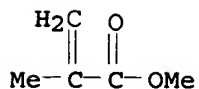
CM 1

CRN 86285-10-1  
CMF C14 H27 O6 P



CM 2

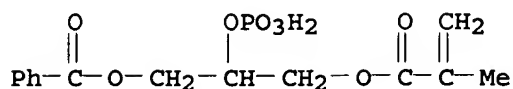
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-15-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 3-(benzoyloxy)-2-(phosphonooxy)propyl ester,  
polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

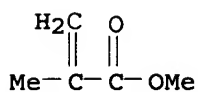
CM 1

CRN 86285-14-5  
CMF C14 H17 O8 P



CM 2

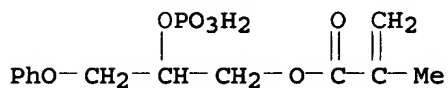
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-23-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
3-phenoxy-2-(phosphonooxy)propyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

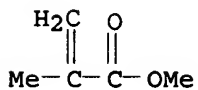
CM 1

CRN 86285-22-5  
CMF C13 H17 O7 P



CM 2

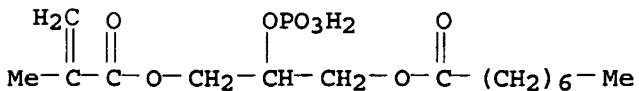
CRN 80-62-6  
CMF C5 H8 O2



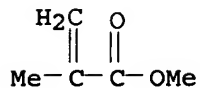
RN 86285-25-8 HCAPLUS  
CN Octanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-2-(phosphonooxy)propyl  
ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 86285-24-7  
CMF C15 H27 O8 P

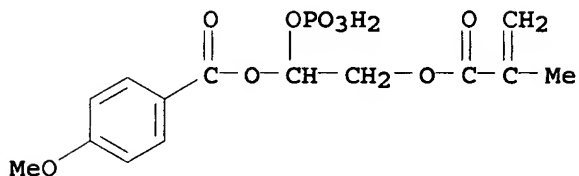


CM 2

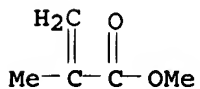
CRN 80-62-6  
CMF C5 H8 O2

RN 86285-27-0 HCAPLUS  
CN Benzoic acid, 4-methoxy-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]-1-(phosphonooxy)ethyl ester, polymer with methyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

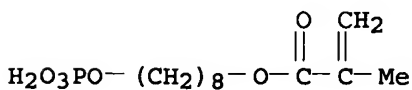
CRN 86285-26-9  
CMF C14 H17 O9 P

CM 2

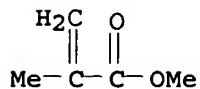
CRN 80-62-6  
CMF C5 H8 O2

RN 86285-33-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 8-(phosphonooxy)octyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

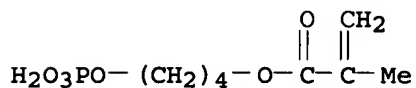
CM 1

CRN 85589-98-6  
CMF C12 H23 O6 P

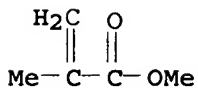
CM 2

CRN 80-62-6  
CMF C5 H8 O2RN 86285-38-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
4-(phosphonooxy)butyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

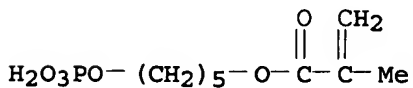
CM 1

CRN 40074-59-7  
CMF C8 H15 O6 P

CM 2

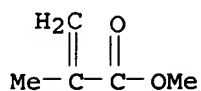
CRN 80-62-6  
CMF C5 H8 O2RN 86285-70-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
5-(phosphonooxy)pentyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85589-94-2  
CMF C9 H17 O6 P

CM 2

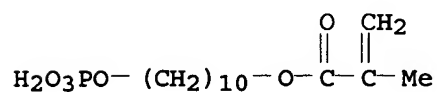
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-72-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
10-(phosphonooxy)decyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

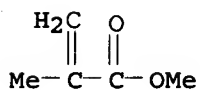
CM 1

CRN 85590-00-7  
CMF C14 H27 O6 P



CM 2

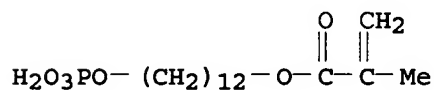
CRN 80-62-6  
CMF C5 H8 O2



RN 86285-73-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
12-(phosphonooxy)dodecyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

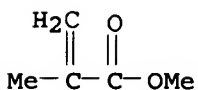
CM 1

CRN 85590-02-9  
CMF C16 H31 O6 P



CM 2

CRN 80-62-6  
CMF C5 H8 O2



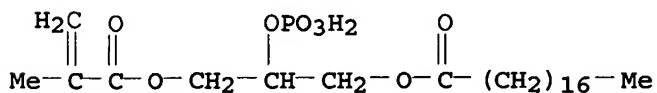
RN 86307-51-9 HCAPLUS

CN Octadecanoic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-2-(phosphonooxy)propyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85724-36-3

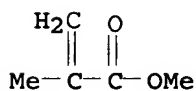
CMF C25 H47 O8 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



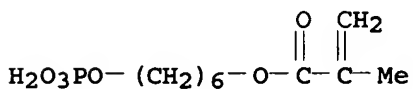
RN 86307-55-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 6-(phosphonooxy)hexyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 85589-96-4

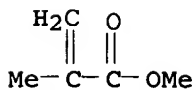
CMF C10 H19 O6 P



CM 2

CRN 80-62-6

CMF C5 H8 O2



L33 ANSWER 40 OF 40 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1981:90267 HCAPLUS

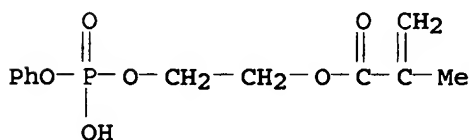
DN 94:90267

TI Adhesive agents for hard tissue containing phosphoric acid monomers

AU Yamauchi, J.; Nakabayashi, N.; Masuhara, E.

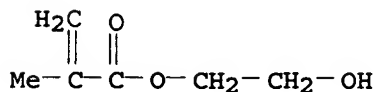


CS Cent. Res. Lab., Kuraray Co., Kurashiki, 710, Japan  
 SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1979), 20(1), 594-5  
 CODEN: ACPPAY; ISSN: 0032-3934  
 DT Journal  
 LA English  
 AB  $\text{CH}_2:\text{CMeCO}_2\text{CH}_2\text{CH}_2\text{OP(O)OR}$  I(R =  $\text{CH}_2\text{CH}_2\text{Br}$ ) (II) [64716-36-5] and I(R = Ph) (III) [64716-34-3] were prepared and their effect on adhesion to hard tissue (ivory and tooth) determined. Systems containing II and III with 2-hydroxyethyl methacrylate (HEMA) had more adhesive strength than the system with HEMA alone. III was more effective than II.  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 23  
 ST phosphoryl methacrylate dental adhesive  
 IT Dental materials and fillings  
 (adhesives, methacryolyethylphosphates for)  
 IT 64716-38-7P 64716-39-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and adhesion of, to hard tissues)  
 IT 64716-34-3P 64716-36-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for dental adhesives)  
 IT 64716-38-7P 64716-39-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and adhesion of, to hard tissues)  
 RN 64716-38-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-[(hydroxyphenoxyphosphinyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 64716-34-3  
 CMF C12 H15 O6 P



CM 2

CRN 868-77-9  
 CMF C6 H10 O3



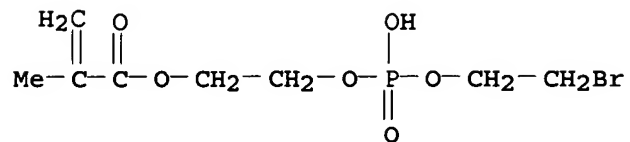
RN 64716-39-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-[[[(2-bromoethoxy)hydroxyphosphinyl]oxy]ethyl 1 ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA

INDEX NAME)

CM 1

CRN 64716-36-5

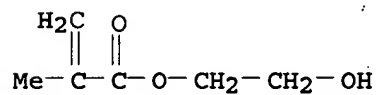
CMF C8 H14 Br O6 P



CM 2

CRN 868-77-9

CMF C6 H10 O3



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